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Department of the Army
Pamphlet 310-12

Military Publications

Index and Description of Army Training Devices

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*DEPARTMENT OF THE ARMY PAMPHLET 310-12

Training

Index and Description of Army Training Devices

Summary. This pamphlet has been revised. It continues to be a compilation of fact sheets that describe Army training devices. Obsolete devices have been removed and newer ones included.

Applicability. This pamphlet applies to the Active Army, the Army National Guard(ARNG), and the U.S. Army Reserve (USAR).

Impact on New Manning System. This pamphlet does not contain information that affects the New Manning System.

Interim changes. Interim changes to this pamphlet are not official unless they are authenticated by the Adjutant General. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

Suggested Improvements. The proponent agency of this pamphlet is The Project Manager for Training Devices (PM TRADE), Orlando, Florida. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to PM TRADE, AMCPM-TND-SLR, Naval Training Center, Orlando, Florida 32813.

Distribution restriction. This publication contains technical or operational information that is for official Government use only. Distribution is limited to U.S. Government agencies. Requests from outside the US Government for release of this publication under the Freedom of Information Act or the Foreign Military Sales Program must be made to PM TRADE, AMCPM-TND-SLR, NTC Orlando, FL 32813.

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*This pamphlet supersedes DA Pam 310-12 dated June 1980 and Change 1 dated October 1982.

SECTION I
INTRODUCTION

1-1. Purpose and Scope.

a. This pamphlet is a reference handbook published as an aid in the identification and description of training devices presently being used by the Active Army and Reserve components. It is not to be used as authorization for requisitioning, stockage, or issue of this equipment. Many of the training devices depicted herein have been produced in limited quantities to meet specific training requirements and have not been generally distributed. For information concerning availability, supply, and maintenance support, contact the local Training and Audiovisual Support Center (TASC).

b. For each training device, there is an illustration and description, together with other pertinent data, which may be utilized in determining if the device can be used to support a training requirement. Actual weights and dimensions may vary somewhat from the average or representative values shown. For information on small-arms targets and target materials see TM 9-6920-210-14.

c. Information on Army commodity managed, type classified devices is contained in SB 700-20.

d. Information concerning Army films, fixed transparencies, Graphic Training Aids (GTA) charts and recordings is contained in DA Pamphlet 108-1.

e. A number of training devices were fabricated at various TASC and distributed Army-wide but do not appear in this pamphlet. Information concerning availability of these types of devices, as well as locally fabricated Department of the Army Training Aids (DATA) type devices, can be obtained from the local TASC. Refer to their copy of TRADOC Pamphlet 71-9. If the TASC does not have a copy, one can be obtained from the local installation publications office or by completing DA Form 17 and sending it to the Commander, US Army Training and Doctrine Command, Attn: AG Publications Stockroom, Fort Monroe, Virginia 23651.

f. Training device requirements for Grant Aid or Military Assistance Programs should be submitted through normal U.S. Army Security Assistance Center channels.

g. New training device requirements should be submitted by potential users in accordance with the provisions of AR 71-9.

1-2. Arrangement of Pamphlet.

This document is arranged in three major sections. They are:

(1) Section I Introduction.

(2) Section II Index.

(3) Section III Training Equipment Summary Sheets.

a. Index. The Index is a list of Army training devices by device (DVC) number. This number is assigned by PM TRADE during the acquisition cycle. The first two digits indicate the basic series of military equipment to which the training device relates and is consistent with those listed in AR 310-2. The remaining digits are assigned in chronological order. For example, 01-91 identifies an aviation (01) device and is the 91st device number assigned under that series. Similar training devices having a common application or training mission are assigned a letter designator (e.g. 01-91A). A higher letter indicates the most current configuration. Devices that have a series of related components are identified with a diagonal and a numerical designator (e.g. 01-91/2). Device numbers are to be used for requisitioning or for reference purposes only when a National Stock number (NSN) has not been assigned and the item is the responsibility of the Project Manager for Training Devices (PM TRADE), Orlando, Florida 32813. Following is the list of basic series numbers that are used in this pamphlet.

Basic Series No.	*Type of Equipment*
01	Aviation
03	Chemical
05	Engineer
06	Field Artillery
07	Infantry
08	Medical
09	Ordnance
11	Signal
17	Armor
20	General
21	Individual Soldier
23	Weapons
44	Air Defense Artillery
55	Transportation

b. Training Equipment Summary Sheets. These are arranged in numerical order by DVC number and contain information and illustrations that describe each training device. Some sheets list other identifying numbers in addition to the DVC numbers. Such numbers may be a corresponding Navy number, a model number, or a mainframe number. The device nomenclature may also include a model or type number assigned to or most generally associated with the training device. Other important features of the Training Equipment Summary Sheets are discussed below.

(1) *Training Category/Level Utilized.* The training category is normally the same as the title for the applicable basic series number. The level utilized is normally one of the following three categories.

(a) Level 1. Applicable to post, installation, or service schools. These devices are installed as permanent fixtures such as the Redeye Moving Target Simulator. They are generally located only at a branch service school or installation. Unit personnel may be moved to these device locations for training.

(b) Level 2. These devices are used in structured training, as at NCO academies, leadership courses, or division schools. These devices may be located at other than Level 1 for support for structured training.

(c) Level 3. These devices may generally be available at TASC for troop unit training. This is a broad category and may apply to various sizes of organizations from division to platoon.

(2) *Logistic Responsible Command, Service, or Agency.* This is the designated managing activity for the device. Activities managing training devices in their respective commodity areas are as follows:

(*a*) PM TRADE, Orlando, Florida 32813.

(*b*) US Army Armament, Munitions, and Chemical Command (AMCCOM) Rock Island, Illinois 61299-6000.

(*c*) US Army Communications-Electronics Command (CECOM) Fort Monmouth, New Jersey 07703-5006.

(*d*) US Army Missile Command (MICOM) Redstone Arsenal, Alabama 35809.

(*e*) US Army Tank-Automotive Command (TACOM) Warren, Michigan 48090.

(*f*) US Army Troop Support Command (TROSCOM) St. Louis, Missouri 63120.

(*g*) US Army Aviation Systems Command (AVSCOM) St. Louis, Missouri 63120.

(*h*) Defense Personnel Support Center (DPSC) Directorate of Medical Materiel, Philadelphia, Pennsylvania 19100.

(*i*) US Army Medical Materiel Agency (USAMMA) Frederick, MD 21701.

(3) *Applicable publications.* These publications pertain to operation and maintenance of the training device. They may be DA Technical Manuals (TM), PM TRADE Technical Documents (TD), Navy NAVSO, NAVEXOS, or NAVTRADEV "P" publications, or manufacturer's handbooks, depending on the managing activity and density of the training device in the field.

(4) *Reference publications.* These publications pertain to operation and maintenance of the tactical equipment to which the training device is related. They may be DA TM's, field manuals (FM), training circulars, or others as applicable.

(5) *Training requirements supported.* This information is included to assist those responsible for training to relate the training device to the specific MOS Code (MOSC) task training requirements which it supports. The tasks are identified with the applicable Army Training Evaluation Program (ARTEP), Army Training Manual (ATM), Soldier's Manual (SM), or Field Manual (FM).

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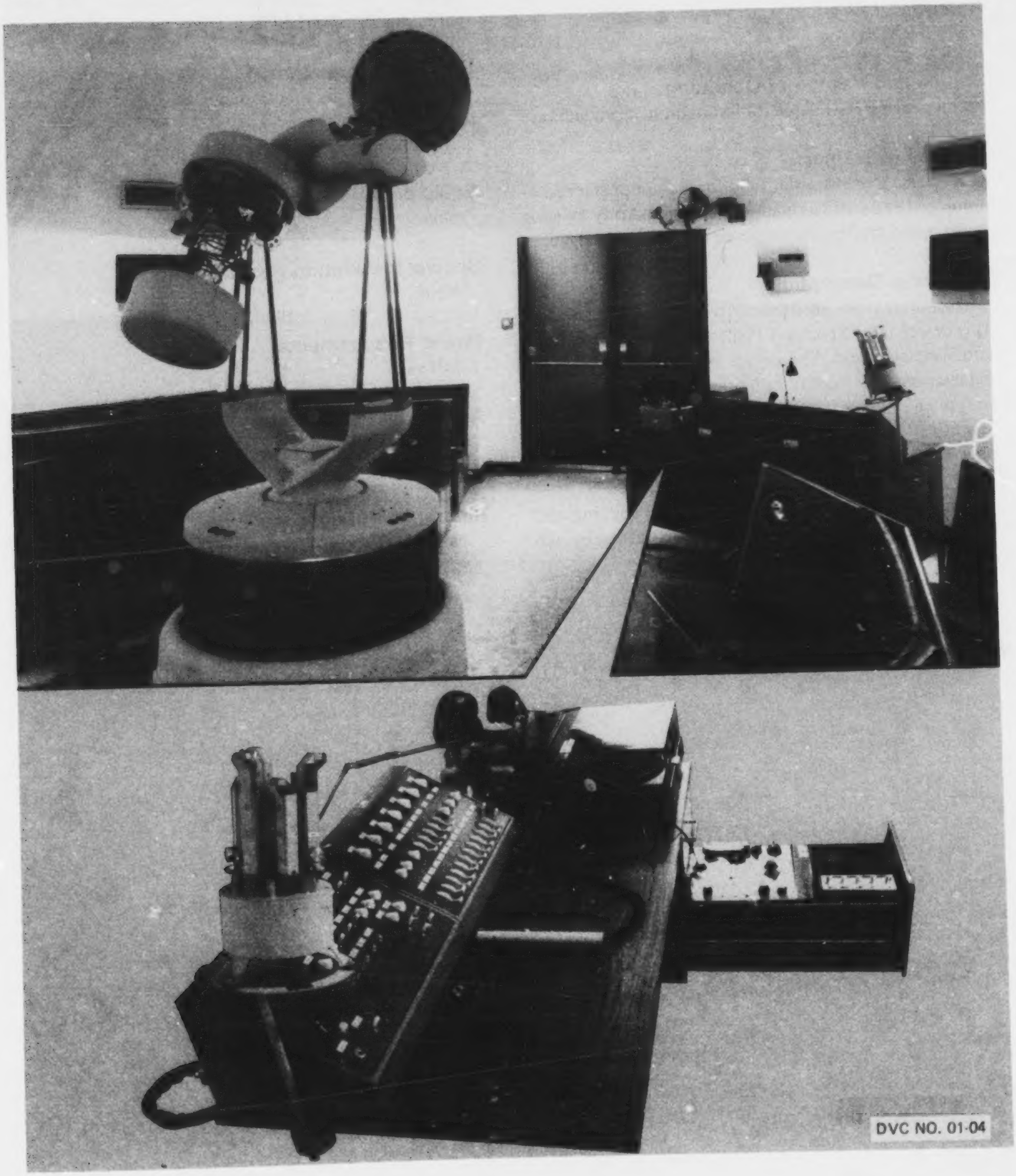
Section III

Training Equipment Summary Sheets

CELESTIAL IDENTIFICATION TRAINER

DVC 01-04

NSN 6930-01-063-7774



DVC 01-04

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To create a realistic star field for the use of star recognition and celestial navigation in training Army aviation students and artillery surveyors in astronomic navigation.

Functional Description:
The trainer is designed primarily as a navigation device. This device is a ''Spitz A-4 Planetarium'' which projects a realistic star field. The device is a new innovation for planetarium classroom, utilizing improved projection instruments which recreate a real-world sky with star identification. Using an improved hemispherical dome, plus solid modular plug-in design, permits a simple operation.

The motion of the planets is produced by rotating optical quality first-surface mirrors which are driven by individual motors through miniature, high precision epicyclic gear trains. Standard projection includes ecliptic, pole, latitude, twilight, satellite, equatorial coordinates, meridian, zenith, geocentric, constellations, and pole, zenith, star (PZS) triangle.

Physical Information:
Dome: 252'' minimum diameter (larger on request); weight varies.

Instrument with pedestal: 108'' high

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
Commercial Handbook of Operating and Maintenance Instructions

Reference Publications:
None

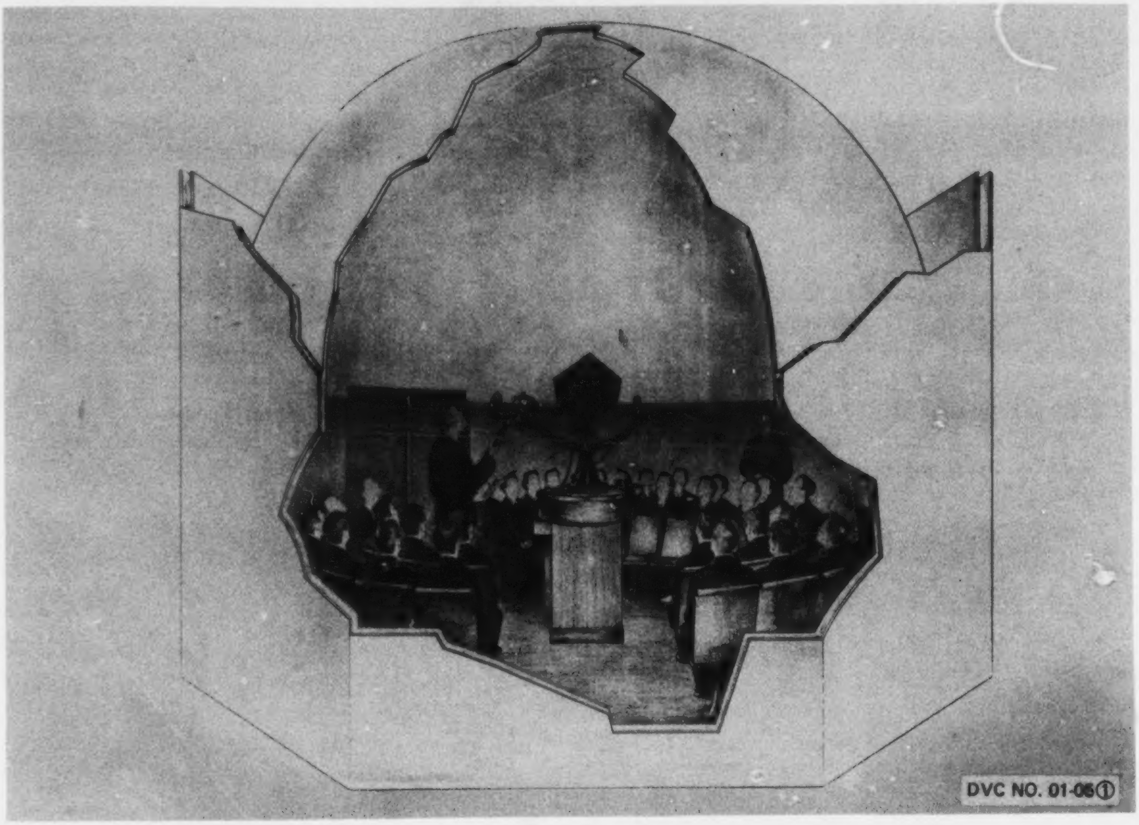
CELESTIAL IDENTIFICATION TRAINER
(ASTRONOMY CLASS)

DVC 01-05A
1BV3

NSN 6930-01-063-7543

DVC 01-05B
1BV3A

NSN 6930-01-063-7765



Training Category/Level Utilized:
Aviation/Level 1

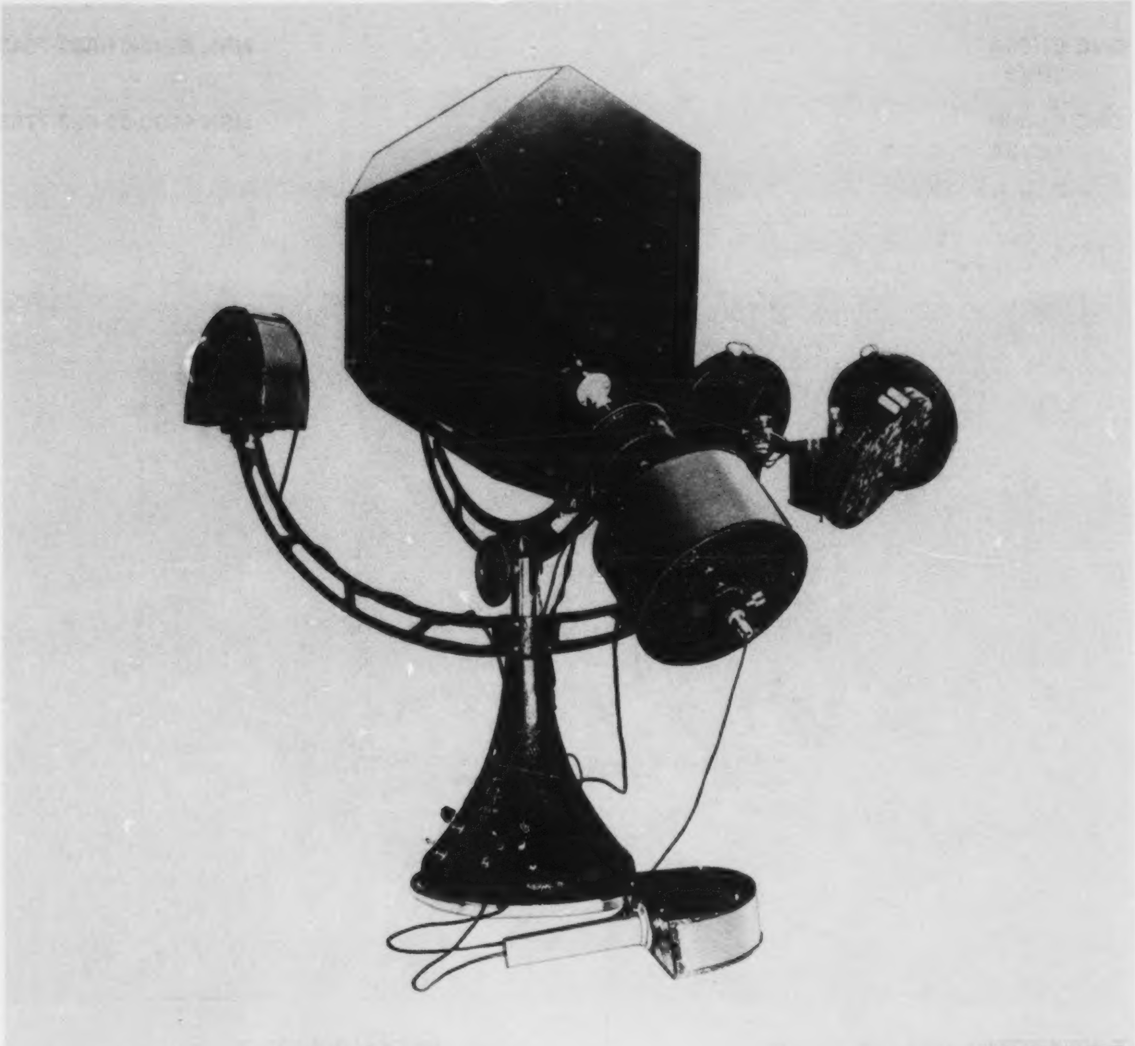
Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To improve the teaching of Army aviation students star recognition and celestial navigation.

Functional Description:

This astronomy class trainer, primarily a navigation device, is an adaptation of the commercial "Spitz A-4 Planetarium" which projects on the inner surface of a hemispherical dome, images of all stars from the first to the fifth magnitude. This includes all the navigational stars, and most of those visible to the naked eye. The constellations are easily recognizable, and the motion of the celestial sphere may be reproduced as it appears from almost any point on the earth's surface. The canopy is rigidly built of light aluminum gores and is so suspended that the horizon line is held 72 inches above the floor. A circular plate, mounted a few inches below a 24-inch



DVC NO. 01-05②

ventilator in the zenith, preserves continuity of surface for star presentation.

The projector is a 12-face planetarium rotated by an electric motor at one-quarter rpm so that diurnal motion is completed in 4 minutes. The planetarium can be rotated manually to permit setting the device at any latitude and local hour angle.

Auxiliary projectors can be attached to the planetarium to project images of the sun, moon, and planets of the solar system, adjusted to depict their configuration for any date, simultaneously with the stars. The celestial equator, ecliptic, hour circles, parallels of declination, meridians, and an adjustable astronomical triangle are also demonstrable.

Physical Information:

Instrument: 36" x 24" diameter; weight 50 lb

Dome: 240" minimum diameter (larger on request); weight varies.

DVC 01-05A,B

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:

NAVEXOS P-954, Handbook of Operation and Maintenance for Celestial Identification Trainer

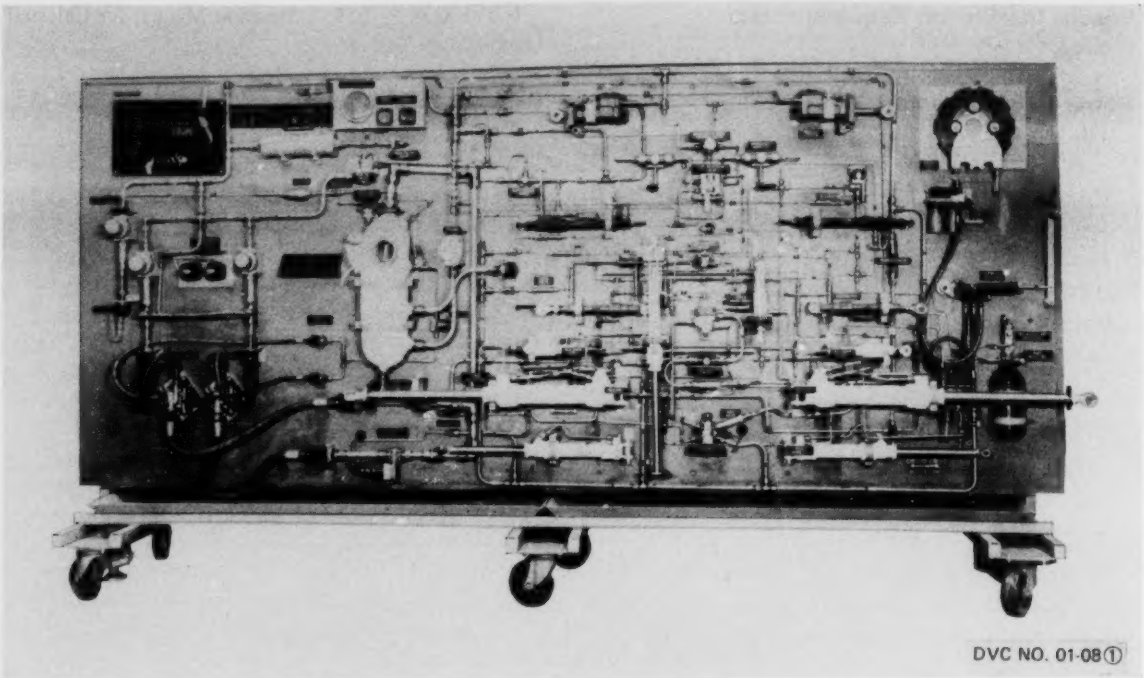
NAVEXOS P-1056, Utilization Manual for Celestial Identification Trainer

Reference Publications:
None

MAINTENANCE (WET) TRAINER FOR OV-1 SERIES AIRCRAFT SYSTEMS

DVC 01-08
2A17

NSN 6930-01-063-7764



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For use in the classroom to teach flight and operational characteristics of OV-1 Series Aircraft Systems to flight and maintenance personnel. The trainer also supports instruction in troubleshooting techniques, construction details, and adjustment of the various systems incorporated in the OV-1 Series Aircraft. The specific training requirements supported are shown following the descriptive data.

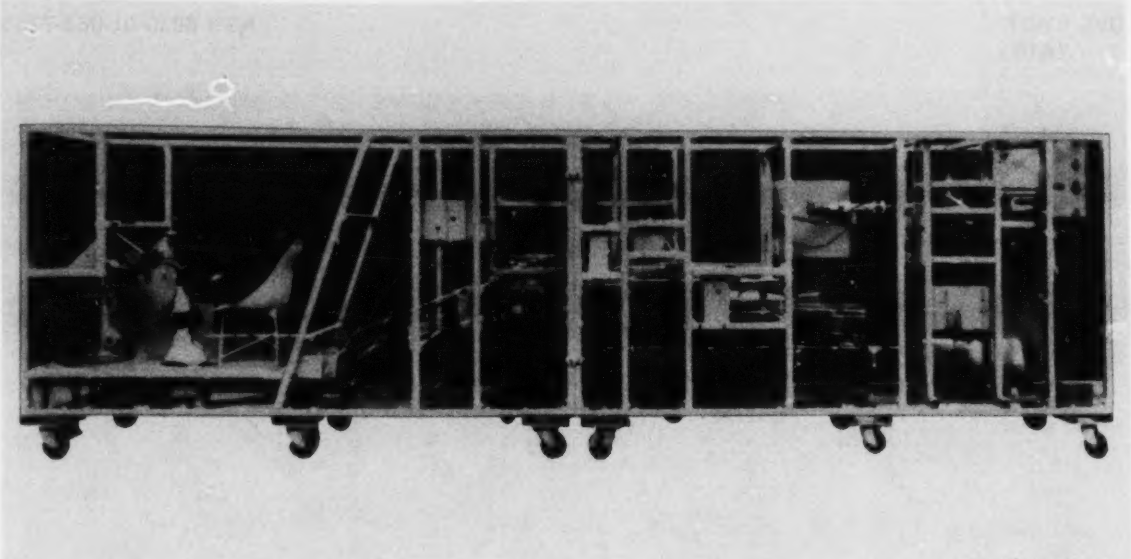
Functional Description:

The trainer consists of six individual panels, each providing the theory and operation of the system it portrays. The systems are laid out on the panels so that components are located about the center line of the panel. The top center of the panel is considered the nose of the aircraft.

The systems represented are—

a. Fuel system
b. Electrical and instrument system
c. Hydraulic system
d. Flight control system
e. Engine oil system
f. Oxygen system

Actual components are mounted on the panels and operate the same way as in the aircraft. Where the use of the actual components is not practical, mockup components are used. Large, bulky components are modified to allow for panel mounting. Tanks, reservoirs, etc., have



DVC NO. 01-08②

plexiglas windows which permit observation of internal parts and mechanisms during operation. Equipment required for panel operation, but which is not part of the system, is mounted on rear of panels so as to be invisible to the trainees.

Physical Information:

Fuel panel: 144" x 34" x 73"; 1,000 lb
Electric and instrument panel: 144" x 34" x 73"; 500 lb
Hydraulic panel: 144" x 34" x 73"; 500 lb
Flight control: 240" x 108" x 72"; 800 lb
Engine oil panel: 72" x 34" x 73"; 250 lb
Oxygen panel: 72" x 34" x 73"; 200 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

a. 110 vac
b. 110 vac
c. 220 vac, 60-cycle
d. 110 vac, 60-cycle
e. 110 vac, 60-cycle
f. 110 vac 60-cycle

Applicable Publications:

NAVEXOS P-2715, Operations and Maintenance Guide with Parts Catalog for OV-1 Series Aircraft

Reference Publications:

TM 55-1510-204 Series

Training Requirements Supported:

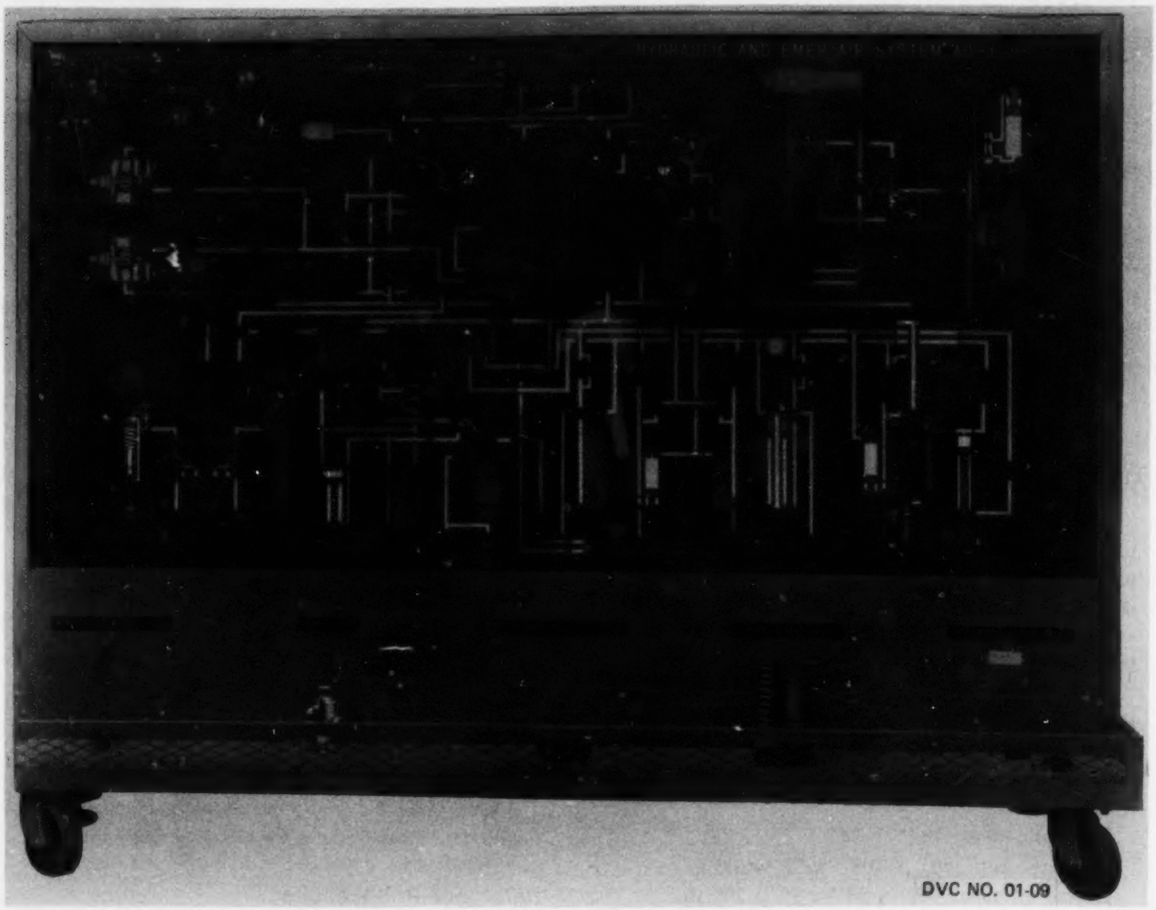
SM 551-67G Tasks

1003	1163	1175	1438
1004	1170		

MAINTENANCE (DRY) TRAINER FOR OV-1 AIRCRAFT SYSTEMS

DVC 01-09
2A18

NSN 6930-01-063-7766



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom or shop use to aid in teaching flight and maintenance personnel at a basic training level the operating theory of the various OV-1 Aircraft Systems, and to familiarize trainees with the physical and functional characteristics of the components and controls used in these systems. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The device consists of three two-dimensional panels, two three-dimensional panels, and an operating mockup mounted on a movable platform, each of which illustrates one or more of the systems of the OV-1 Aircraft.

The two-dimensional panels present schematic-type portrayals of the electrical and instrument systems, the fuel system, and the hydraulic system. Polarized light techniques depict system flow. The panels are also supplemented by cutaway aircraft components.

The main landing-gear system and the nose-gear system are three-dimensional panels, with operational components mounted thereon, while the components of the flight control and rigging systems are mounted on a movable platform. There panels and the platform mockup illustrate the operating principles of the various systems and provide an opportunity for maintenance practice by the trainees.

Modified accessories (cutaway) and connecting members or cables are provided to demonstrate the actual function of the system. The flap and slot presentations are electrically operated where the corresponding aircraft system is hydraulically operated. An hydraulic power cart is furnished for use with the main landing-gear system and nose-gear system panels.

The instructor has controls for setting up all the aircraft system operating conditions as well as introducing malfunctions. Trainees are provided with the actual aircraft controls and switches necessary to select the various operating modes found in the OV-1 Aircraft.

Physical Information:

Fuel panel: 96'' x 34'' x 72''
Electrical and instrument panel: 96'' x 34'' x 72''
Hydraulic panel: 96'' x 34'' x 72''
Flight control mockup: 240'' x 108'' x 72''
Main landing-gear panel: 114'' x 42'' x 76''
Nose landing-gear panel: 96'' x 34'' x 76''
Hydraulic power cart: 34'' x 44'' x 43''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

NAVEXOS P-2385 (U), Operation and Maintenance Guide for Training Aid, Aircraft Systems Maintenance (Dry) OV-1 Aircraft, Device 2A18

Reference Publications:

TM 55-1510-204 Series

Training Requirements Supported:

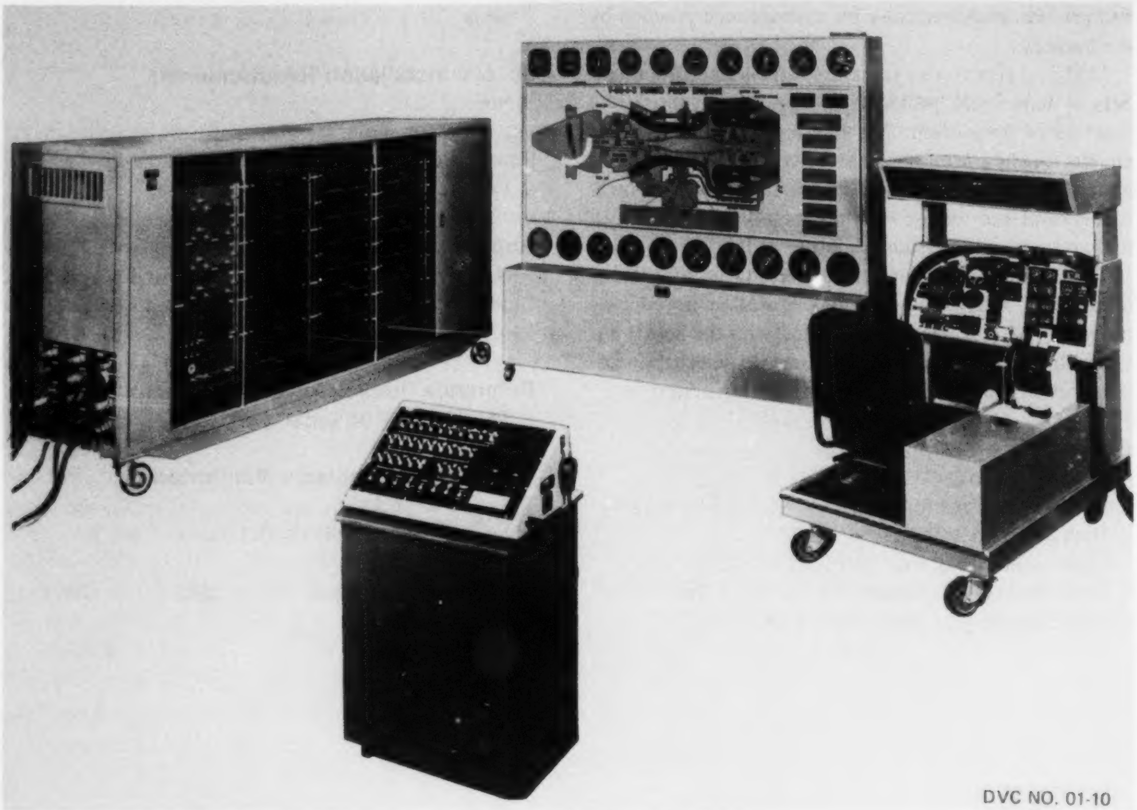
SM551-67G Tasks

1003	2005	2085	2091
1004			

UNIVERSAL ENGINE TRAINER SIMULATOR

DVC 01-10
2A27

NSN 6910-01-064-4420



DVC NO. 01-10

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom or shop use to train aviators and maintenance personnel in correct starting and operating procedures, and in malfunction recognition and troubleshooting procedures for the T53-L-7 and T53-L 701 engines. The trainer dynamically simulates the effect of various engine and fuel system malfunctions, and the effect of operating parameters on engine performance, for the OV-1C and OV-1D Aircraft. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer simulates the performance of the T53-L-7 and T53-L-701 turboprop engines in starting and operating conditions. Realistic instrument indications for normal operations are computed and registered on the instruments contained in the trainee's station, and above and below the engine cross-section on the engine display panel assembly. The instructor may introduce abnormal conditions to demonstrate such effects on engine performance. Associated sounds reflecting engine operation are also produced.

Physical Information:
Display panel: 97" x 34" x 95"; 650 lb
Operator station: 37" x 61" x 64"; 650 lb
Instructor's console: 25" x 14" x 10"; 30 lb
Computer cabinet: 124" x 136" x 67"; 2,400 lb

Equipment Required, Not Supplied:
None

DVC 01-10

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
Operation and Maintenance Handbook for Universal Engine Trainer Simulator, Device 2A27 (commercial handbook)

Reference Publications:
TM 55-1510-204 Series

Training Requirements Supported:

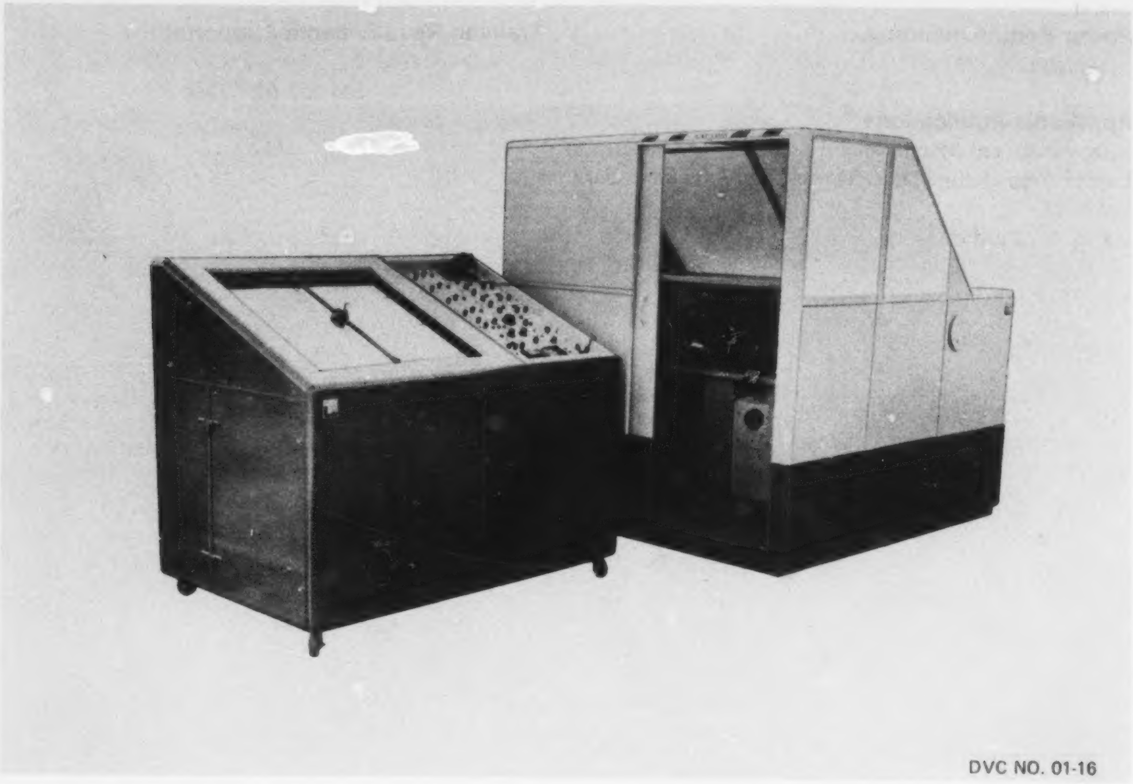
SM 551-67G Task

2112

FIXED-WING SINGLE-ENGINE AIRCRAFT BASIC INSTRUMENT FLIGHT TRAINER

DVC 01-16
2B12A

NSN 6930-01-063-7763



DVC NO. 01-16

Training Category/Level Utilized:
Aviation/Level 3

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide an efficient, safe, and economical means for training aviators of fixed-wing aircraft, and for maintaining aviator instrument proficiency. It is used in basic and refresher training in cockpit procedures, instrument flying, and radio navigation for fixed-wing, single-engine, single-place aircraft. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is a stationary basic instrument trainer consisting of two units: a trainee station and a radio aids unit. The trainee station provides side-by-side seating to enable the instructor to discuss student procedures. The instructor may also function from a position in the rear of the trainer, using a head set and microphone while viewing the student's action through a window. All necessary radio aids are provided to permit representative navigational and approach problems to be programmed for the student.

Physical Instrumentation:
Trainee station: 65'' x 64'' x 69''; 580 lb
Instruction station: 49'' x 60'' x 40''; 374 lb

Equipment Required, Not Supplied:
None

DVC 01-16

Special Installation Requirements:

Classroom with minimum dimensions of 180'' x 144'' x 120'' high.

Power Requirements:

110 vac

Applicable Publications:

TM 55-6930-200 Series

Reference Publications:

FM 1-50

Training Requirements Supported:

MOSC 15-2E, 15-2F, 100P, and 100Q

ATM TC 1-145 Tasks

1502
1503
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4508
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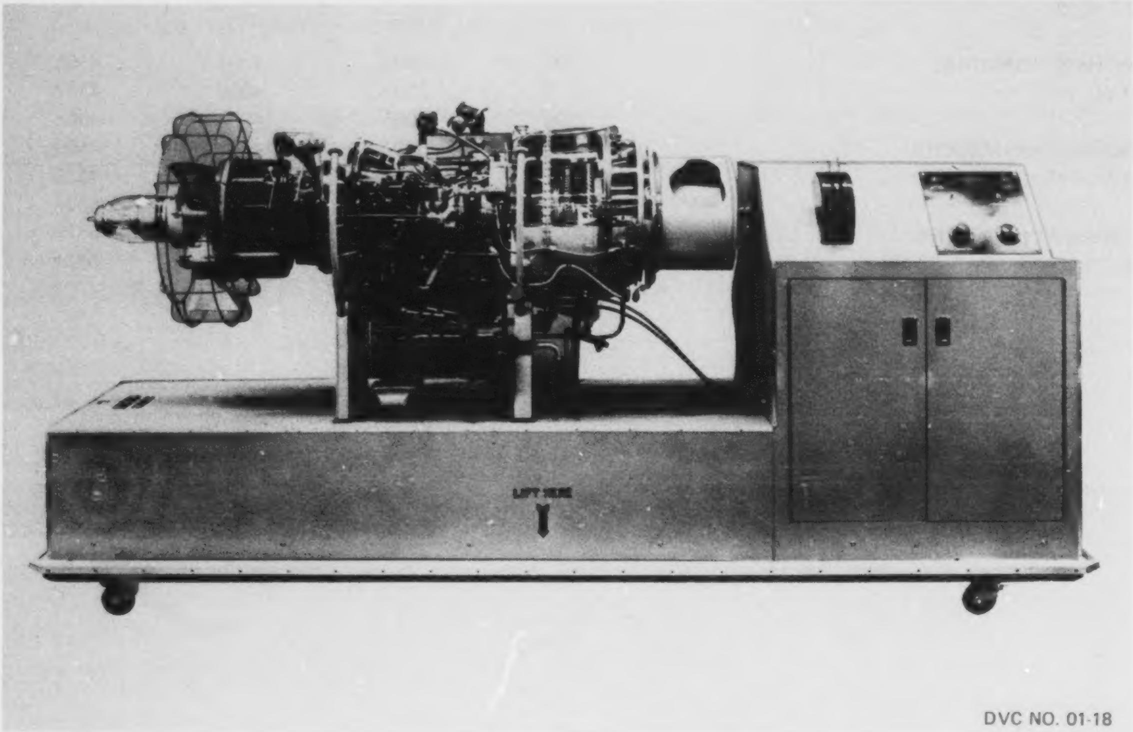
4512
4513
6501

OV-1 AIRCRAFT ENGINE T53-L-3 CUTAWAY TRAINER

DVC 01-18
2H13

NSN 6930-01-063-7762



DVC NO. 01-18

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer visually portrays the physical and functional characteristics of turboprop engines, propellers and their accessories and controls, and familiarizes trainees with the operation of significant parts and accessories of the Lycoming T53-L-3 engine and the Hamilton Standard 53C51-3 Hydromatic variable pitch propeller. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a full-scale, three-dimensional motorized and animated mockup of the principal propulsion components and systems of turbo-powered aircraft. The two principal units of the device are the power plant unit and the cockpit display unit. Each is mounted on a separate, castered pallet.

The Power Plant Unit includes (1) an engine cutaway mockup reproduction of the Lycoming gas turbine engine, Model T53-L-3; (2) a mockup of the Hamilton Standard Model 53C51-3 hydromatic, variable-pitch propeller; and (3) a control console containing the switches and controls for animating the engine-propeller mockup.

The cockpit display unit is a 1-1/2:1 reproduction of those portions of the instrument and control panels which relate to engine and propeller operation of the OV-1 Aircraft. The pictorially represented instruments are equipped with adjustable indicators which can be set by hand. The controls duplicate, in appearance as well as in feel, the operational controls in the OV-1 Aircraft.

DVC 01-18

The device employs a combination of operational parts, substitute material, and cutaway areas in order to provide optimum visualization of both external and internal portions of the engine, including fixed and moving parts. The engine mockup is cradled in a steel rollover mechanism equipped with a position-locking knob. The rollover mechanism permits rotation of the entire engine-propeller assembly around its longitudinal axis, to any position up to 90° in either direction from the vertical plane.

The propeller mockup consists of modified operational equipment, including substitution of a transparent dome. Use of a Slo-syn motor system to activate the pitch-changing mechanism in lieu of hydraulic control is another innovation. A steel guard provides protection against injury from the rotating stub blades

Another feature of the training aid is a set of manually operated panels. These include two-dimensional schematic diagrams of the fuel and propeller systems, and three-dimensional mockups of the compressor airbleed assembly and torquemeter system.

Physical Information:

Power plant unit: approximately 132'' x 48'' x 60''
Cockpit display unit: approximately 78'' x 36'' x 78''
Panels: 36'' x 36'' x 72''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

NAVEXOS P-2312 (U), Operation and Maintenance Guide with Parts Catalog for Training Aid, Cutaway, AO-1 Aircraft Engine T53-L-3, Device X2H13

Reference Publications:

TM 55-1510-204 Series

Training Requirements Supported:

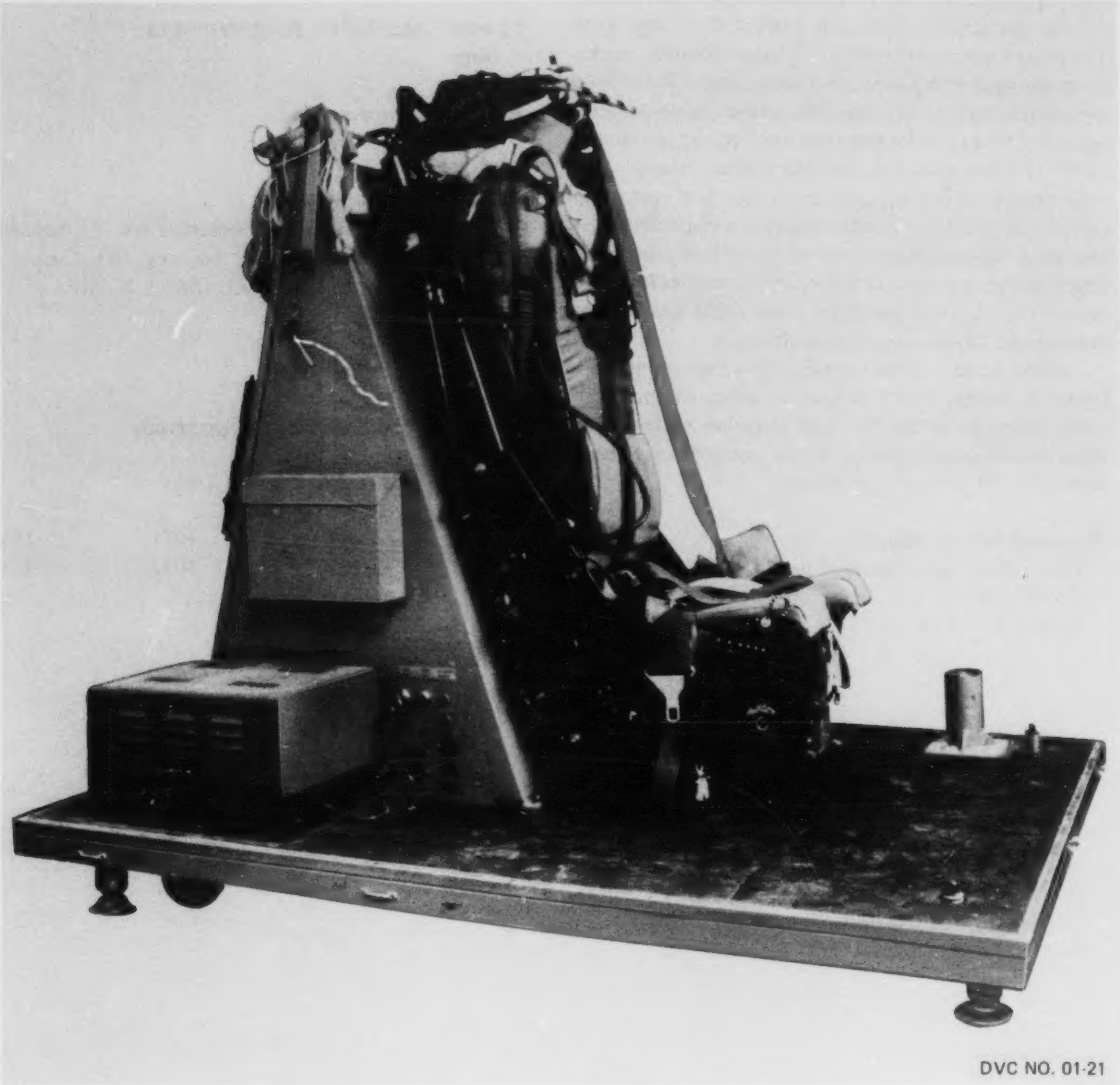
SM 551-68B Tasks

1026	1029	1031	1033
1028	1030	1032	1034

TRAINER, EJECTION SEAT, MAINTENANCE

DVC 01-21
9E1A

NSN 6930-00-758-9790



DVC NO. 01-21

Training Category/Level Utilized:
Aviation/Level 2

Logistic Responsible Command, Service, or Agency
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

For classroom or shop use to provide training on the MK-J58 Ejection Seat. The trainer aids in the teaching of installation and maintenance procedures for the operational ejection seat used in the OV-1 Mohawk Aircraft. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is an operational MK-J58 Martin-Baker seat assembly mounted on the forward panel of a storage

DVC 01-21

cabinet. It is complete and identical to that installed in the OV-1 Aircraft, except that explosive cartridges are not included in the three-cylinder telescoping ejection gun or in the drogue parachute gun. The trainer is equipped with a complete set of field maintenance tools to permit trainees to perform maintenance procedures as instructed. The trainer is capable of duplicating all maintenance situations, including maintenance checks, operational maintenance, troubleshooting, and component removal, repair, and installation.

Physical Information:
48'' x 72'' x 64''; 700 lb

Equipment Required, Not Supplied:
Cartridges

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
None

Reference Publications:
TM 10-1670-206-23

Training Requirements Supported:

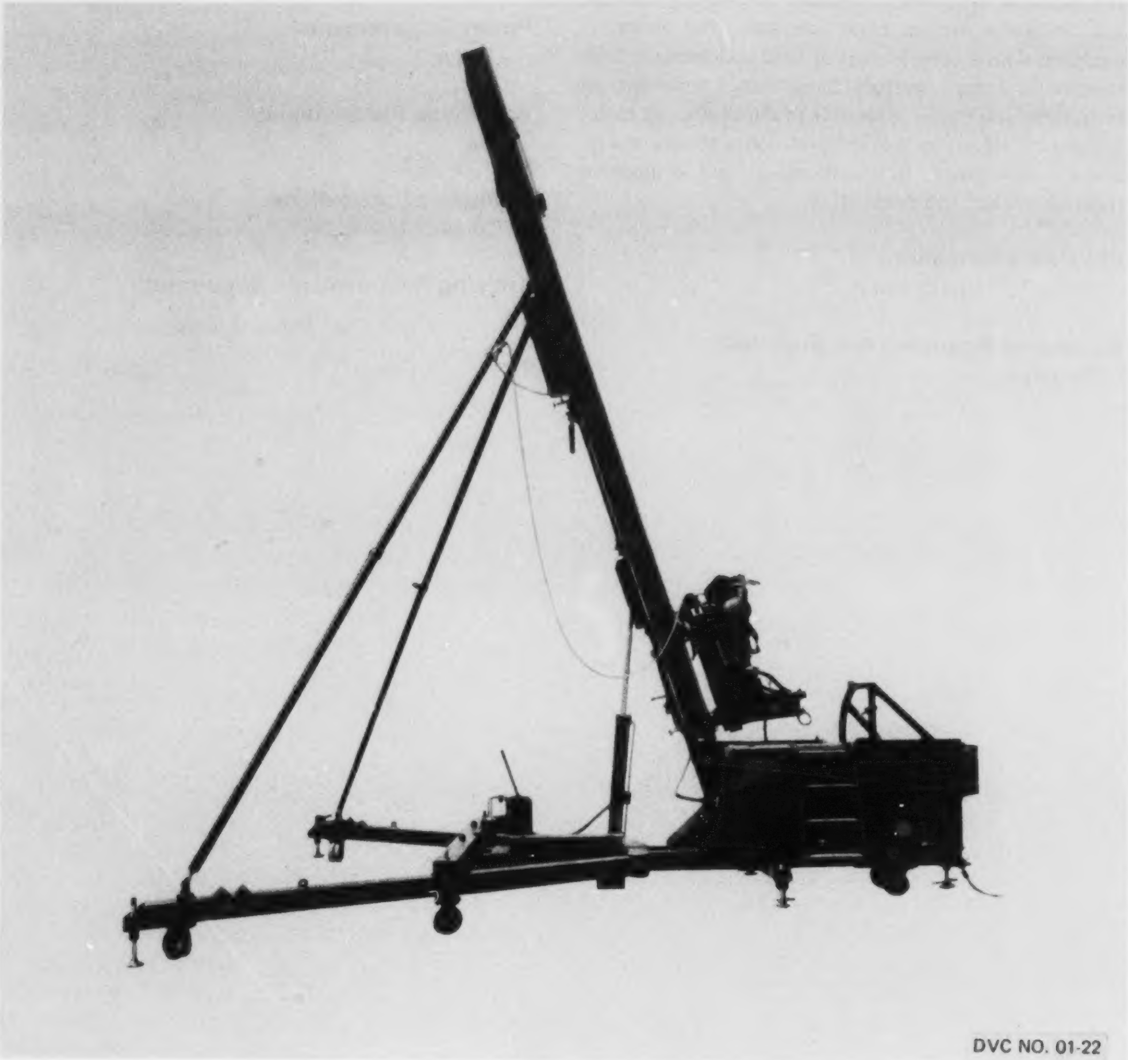
SM 551-67G Tasks

1599 2040

TRAINER, EJECTION SEAT

DVC 01-22
9E2A

NSN 6930-00-758-9791



Training Category/Level Utilized:
Aviation/Level 2

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To train Army aviators and other crew members in ejection procedures so they become automatic during an actual aircraft bailout. The trainer familiarizes personnel with proper pre-ejection procedures and sensations produced during an ejection in order to promote confidence in emergency survival equipment. The device provides realistic training that cannot be accomplished in the aircraft. ATM tasks identified; their publication is

pending. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a 2,000-pound structural-steel mobile foundation supporting a 24-foot steel tower which the ejected seat ascends. At the base of the tower, an open-top, mock cockpit surrounds the seat before ejection. Seat and student are ejected by a split-tube catapult which obtains its thrust from the burning of powder contained in the cartridge. An instructor's panel mounted on the outside of the cockpit provides procedure check lights and signals, together with a catapult safety release.

Physical Information:
60" x 366" x 288"; 4,600 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Classroom with minimum size 360" x 360" x 312"

Power Requirements:
110 vac

Applicable Publications:
NAVEXOS P-2201, Operation and Maintenance Guide with Parts List
TM 55-6930-205-15

Reference Publications:
TM 10-1670-206-23

Training Requirements Supported:

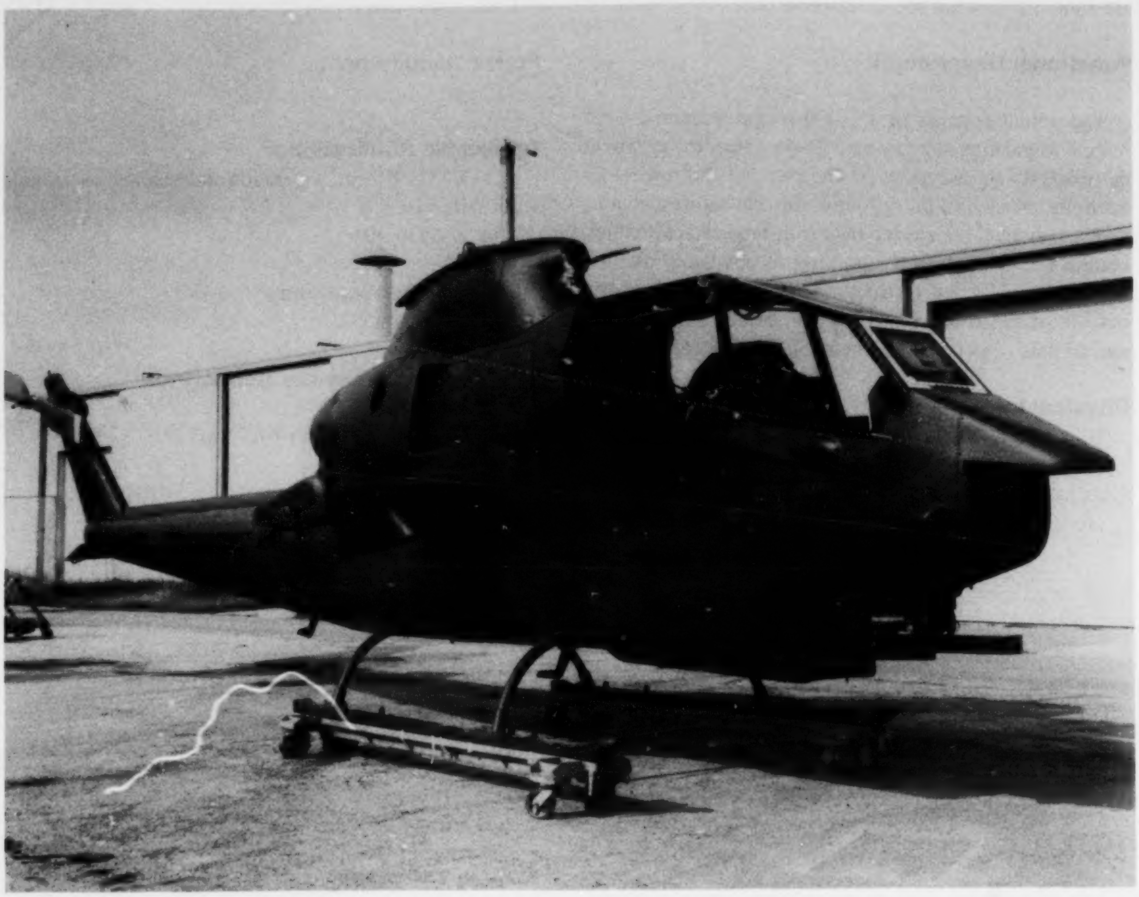
SM 551-67G Tasks

1599 2040

AH-1S COMPOSITE TRAINER

DVC 01-31
585

NSN 6930-01-063-7769



Training Category/Level Utilized:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use in the support of maintenance training on the AH-1S helicopter. The trainer provides a realistic environment for presenting the weapons system, flight controls, power train, stability and control augmentation system, and associated hydraulic systems of the AH-1S helicopter. The use of operational equipment provides a comprehensive means of instructing installation, removal, servicing, adjustment, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer consists of an operational AH-1S helicopter airframe, including wings and skid gear. The kain rotor blades are not installed. The tail rotor blades are complete. The canopy, access doors, and left engine and transmission cowling are omitted from the trainer for greater classroom convenience. All major components and allied parts of the helicopter control systems which require adjusting or rigging, are included in the trainer.

Physical Information:
Trainer: 540" x 126" x 144"; 6500 lb
Hydraulic Power Unit: 36" x 48" x 56"; 325 lb

Equipment Required, Not Supplied:
None

DVC 01-31

Special Installation Requirements:
None

Power Requirements:
Trainer: 110 vac, 15A
Hydraulic Power Unit: 220 vac, 30A, 3-phase

Applicable Publications:
Operation and Maintenance Manuals for AH-1S Trainer

Reference Publications:
TM 55-1520-221 series

Training Requirements Supported:

SM 551-67Y Tasks

1005	1007	1140	1143
1006	1139	1141	1144

AH-1Q COMPOSITE TRAINER

DVC 01-31A
585A

NSN 6930-01-063-7770

DVC NO. 01-31A

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use in the support of maintenance training on the AH-1Q Helicopter. The trainer provides a realistic environment for presenting the weapon system, flight controls, power train, stability and control augmentation system, and associated hydraulic systems of the AH-1Q Helicopter. The use of operational equipment provides a comprehensive means of instructing installation, removal, servicing, adjustment, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a modification of the AH-1G Composite Trainer, DVC 01-31, to the AH-1Q Tow-Cobra Helicopter configuration. Construction is basically of actual helicopter nonairworthy components with only the minimum electrical system installed as necessary for the operation of the hydraulic and control system.

The trainer is provided with an M28A1E1 Armament Subsystem which consists of a power-operated, chin-turret mounting combinations of the M134 Machine Gun and the M129 Grenade Launcher. A complete XM65 TOW Missile Subsystem, including the XM128 Helmet Sight System and four two-tube missile launchers, is mounted in the same position as in the actual helicopter. The external stores pylons are mounted on the trainer to accept various combinations of the TOW launchers; the seven-tube, 2.75-inch rocket pod, the 19-tube, 2.75-inch rocket pod, and the XM18E1 7.62mm Gun Pod. Also incorporated in the trainer are the crashworthy fuel cells, tractor tail rotor system, and smoke grenade dispenser. The canopy removal system is installed as in production aircraft except that it is permanently deactivated for training purposes.

The weapon systems and all major components of the helicopter control system which require rigging or adjustment, are completely operational. A 1,500-psi power unit is supplied to furnish the required hydraulic pressures.

Physical Information:

Trainer: 540'' x 126'' x 144''; 6,500 lb
Hydraulic power unit: 36'' x 48'' x 56''; 325 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Trainer: 110 vac, 15 A
Hydraulic power unit: 220 vac, 30 A, 3-phase

Applicable Publications:

Operation and Maintenance Manuals for AH-1G and AH-1Q Trainers.

Reference Publications:

TM 55-1520-221 Series
TM 9-1270-212 Series
TM 9-1425-473 Series
TM 9-1090-203 Series
TM 9-1005-299 Series
TM 9-1005-257 Series
TM 9-1330-208 Series

Training Requirements Supported:

SM 551-68J Tasks

1001	1038	1110	2022
1036	1101	1111	2041
1037			

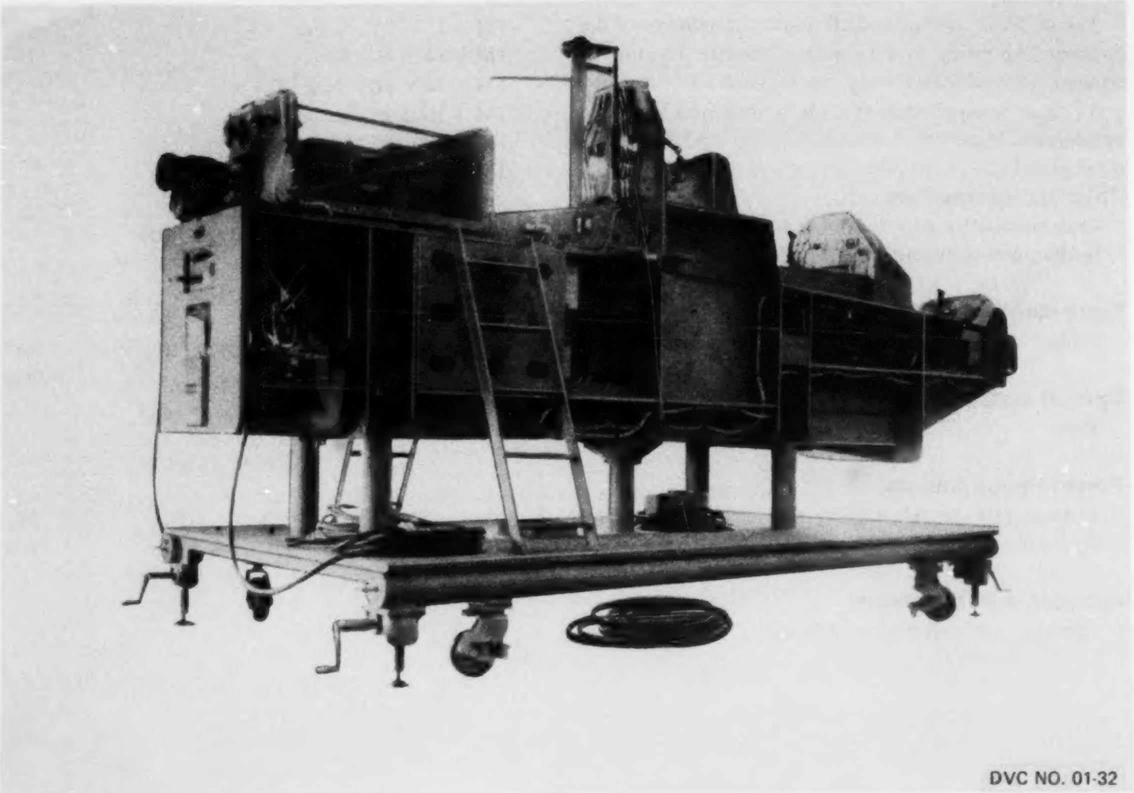
SM 551-68M Tasks

1003	1009	1074	2024
1005	1037	1096	2041
1007			

AH-1G ELECTRIC AND HYDRAULIC SYSTEMS TRAINER

DVC 01-32
586

NSN 6930-01-064-2781



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For use in the classroom to support maintenance training on the AH-1G Helicopter. The trainer provides a realistic environment to familiarize trainees with theory, operation, adjustment, and maintenance of the AH-1G Helicopter electrical and hydraulic systems. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer consists of a framework mockup of the AH-1G Helicopter with the exception of the tail boom. All electrical and navigational components are full size and are located in the same positions as on the operational helicopter. The trainer is mounted on a dolly which incorporates leveling jacks and self-locking casters. A variable-speed drive unit is mounted in the approximate location of the engine and transmission.

The drive unit is placed in operation by the same starting sequence as for the gas turbine engine on the helicopter. The speed is varied by rotation of the throttle twist grip on the aviator's collective stick, and by the governor rpm control within the limits of its range.

A variable-speed electric drive motor is the central component of the drive unit. Each end of this motor is equipped with a belt drive pulley. The starter-generator, hydraulic pumps, and tach generator are also equipped with pulleys and are driven by belts from the drive motor. The amount of current through the clutch coil determines the output speed of the drive unit. The clutch controller provides current to the coil.

All instruments, indicator lights, and switches required by the trainer systems are installed and are located in the same positions as on the helicopter. Instruments not required are represented by photo decals. The instructor's control panel contains the switches and circuit breakers by which malfunctions are introduced into the systems.

Physical Information:
Hydraulic power unit: 120" x 240" x 120"; 1,150 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
28 vdc; 220 vac, 3-phase, 60 A per phase, 60 cycle

Applicable Publications:
Operation and Maintenance Manuals for AH-1G Trainer

Reference Publications:
TM 55-1520-221 Series

Training Requirements Supported:

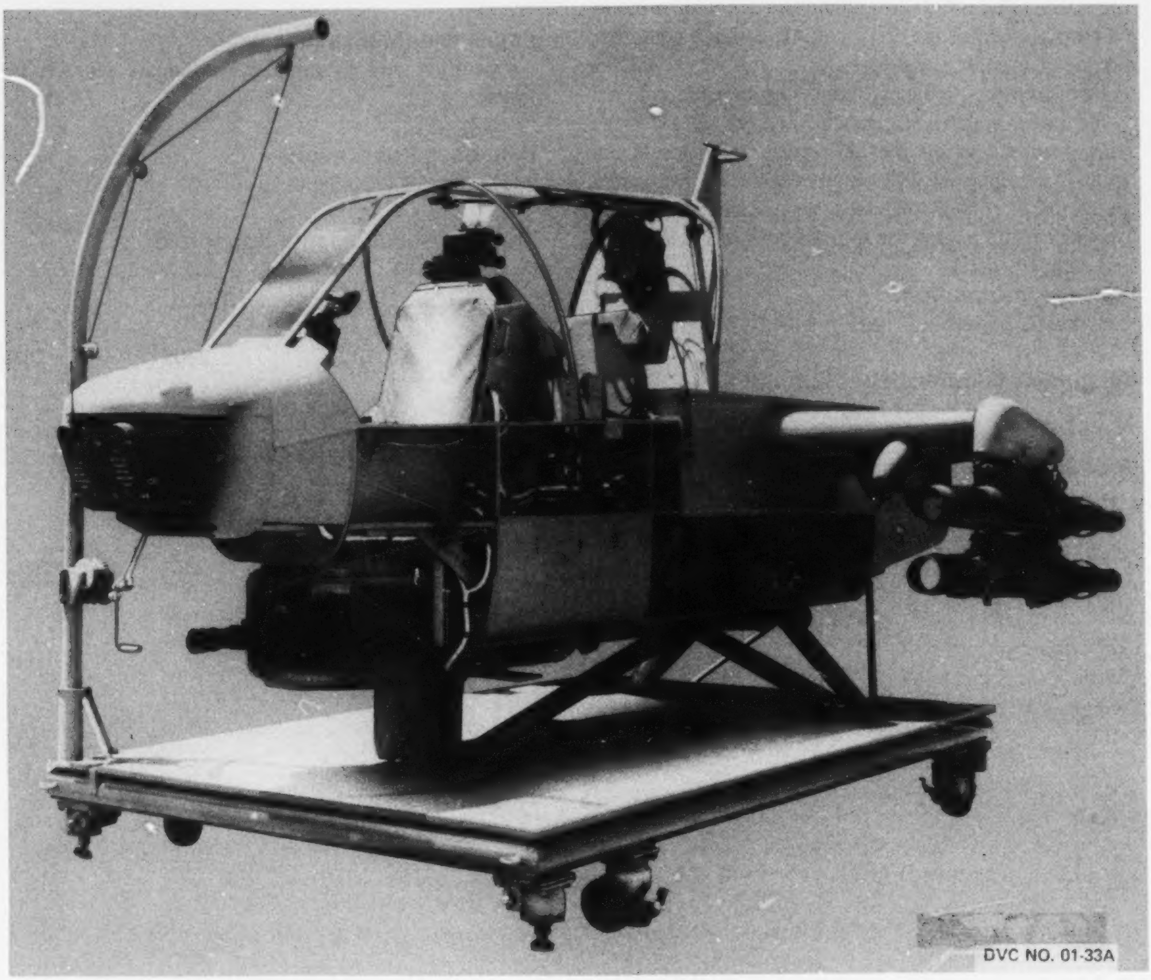
SM 551-68F Tasks

1003	1067	2005	2086

AH-1Q ARMAMENT SYSTEMS MAINTENANCE TRAINER

DVC 01-33A
587A

NSN 6930-01-063-7771



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

Provides a realistic environment for presenting the techniques for rigging and maintenance on all weapon systems of the AH-1Q Tow-Cobra Helicopter. The use of operational equipment provides a comprehensive means of instructing disassembly, assembly, and repair of armament control boxes; checking for electrical circuits for voltage and continuity; loading and unloading ammunition; boresighting; general repair and troubleshooting of overall weapon systems. The specific training requirements supported are shown following the descriptive data.

Functional Description:

Pilot's and gunner's controls are installed in their actual locations but are not movable. The controls incorporate all switches applicable to the weapon system.

The trainer is provided with an M28A1E1 Armament Subsystem, which consists of a power operated chin turret,

DVC 01-33A

mounting combinations of the M134 Machinegun and the M129 Grenade Launcher. A complete XM65 TOW Missile Subsystem, including the XM128 Helmet Sight System and four two-tube missile launchers, is mounted in the same position as in the actual helicopter. The external stores pylons are mounted on the trainer to accept various combinations of the TOW launchers; the seven-tube, 2.75-inch rocket pod; the 19-tube, 2.75-inch rocket pod; and the XM18E1 7.62mm Gun Pod. A hand-operated hoist is installed on the trainer platform to facilitate removal and installation of the Telescopic Sight Unit.

All components of the weapon system are completely operational and function in the same manner as in the actual helicopter. A 1,500-psi power unit is supplied to furnish the required hydraulic power.

Physical Information:

312'' x 126'' x 108''; 2,700 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Trainer and hydraulic power unit: 220 vac, 60 A, 3-phase, 60 cycle

Applicable Publications:

Operation and Maintenance Manuals for AH-1G and AH-1Q Trainers

Reference Publications:

TM 55-1520-221 Series
TM 9-1270-212 Series
TM 9-1425-473 Series
TM 9-1090-203 Series
TM 9-1005-299 Series
TM 9-1005-257 Series
TM 9-1330-208 Series

Training Requirements Supported:

SM 551-68J Tasks

1001
1036
1037
1038
1101
1110

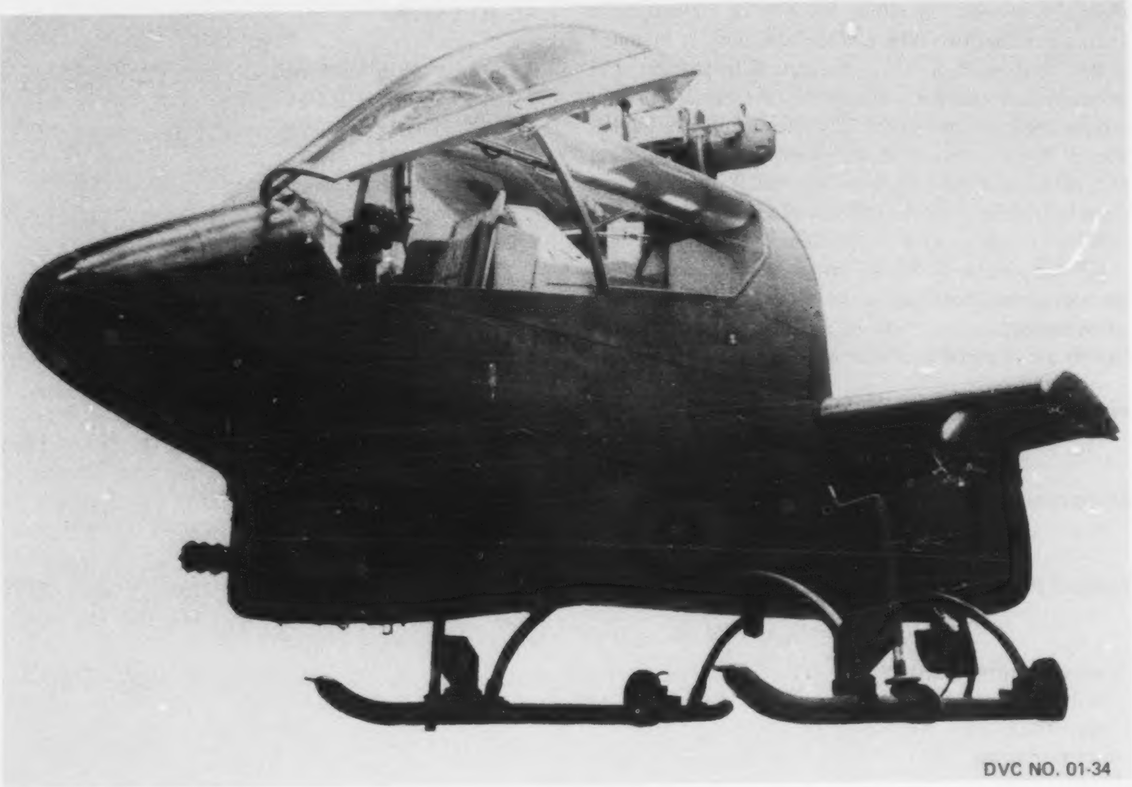
SM 551-68M Tasks

2022
2024
2046
2136
2198

AH-1G ARMAMENT SYSTEMS TRAINER

DVC 01-34
597

NSN 6930-01-063-7767



DVC NO. 01-34

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For use in the classroom to develop crew coordination in sighting, aiming, and mission profile of all weapons applicable to the AH-1G Helicopter. The trainer provides a realistic environment for presenting the armament system of the production aircraft; also provides the crew chief, aviator, and gunnery personnel training in armament systems installation, removal, operation, loading, boresighting, alignment, operation circuit testing, operational troubleshooting, maintenance, and preflight checks.

Functional Description:

Simulated operation of armament controls provides for weapon selection, fire restrictions, indicators, fire mode, fire rate, and sequencing to duplicate the functions in the actual helicopter. The ammunition compartments are full-size and contain all hardware necessary to facilitate loading and unloading. The trainer contains the same cockpit and instrument lights as the AH-1G, and all are operable.

The trainer has both aviator and gunner cyclic sticks installed. The sticks are mounted in their actual locations but are not movable. The cyclic stick grips incorporate all switches and controls applicable to the armament system.

The trainer is provided with the M28 Turret. The turret is capable of traversing the entire azimuth and elevation ranges of the actual helicopter. The external stores pylons, which attach to the wing hard-points provided on the mockup, are included. This enables the trainer to accept the M18 Gun Pod, the 19-tube and 7-tube rocket pods in the same combinations as the actual helicopter, the M35 20mm Automatic Gun, and the XM118 Grenade Dispenser. Operation of the jettison release system in the external stores pylon is mechanically and electrically simulated. Electrical power to the squibs is indicated by a light. Actual jettison cannot be performed. Sights are installed for both aviator and gunner, the same as in the helicopter. The gunner's sight provides the necessary signals for slaving the turret to the sight. An instructor's control panel is used to induce simulated malfunctions into the system.

Physical Information:
Trainer: 272'' x 125'' x 102''; 900 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
220 vac, 60 A, 3-phase, 60 cycle, 1,500-psi hydraulic power source

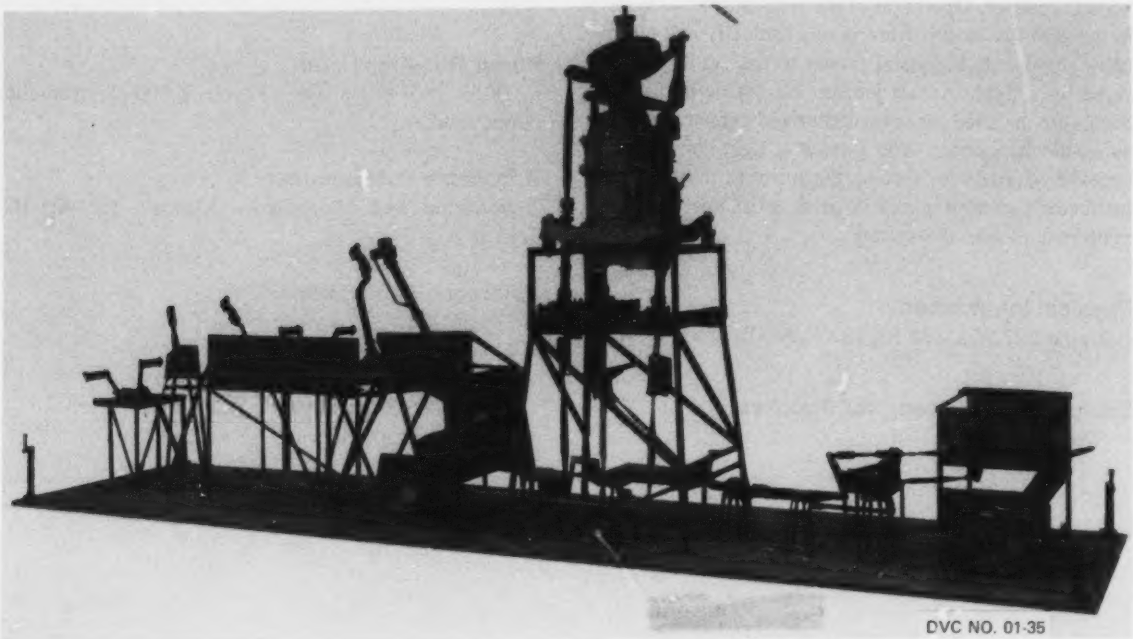
Applicable Publications:
Operation and Maintenance Manuals for AH-1G Trainer

Reference Publications:
TM 55-1520-221 Series
TM 9-1090-203 Series
TM 9-1005-299 Series
TM 9-1005-257 Series
TM 9-1330-208 Series

AH-1G FLIGHT CONTROL SYSTEM TRAINER

DVC 01-35
598

NSN 6930-01-064-4448



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use in the support of maintenance training on the AM-1G Helicopter. The trainer provides a realistic environment for presenting the operation of flight control equipment and system simulation of the AH-1G Helicopter.

Functional Description:
The trainer consists of the aviator and gunner flight controls mounted in a welded tubular steel structure with a mobile base. The trainer incorporates the necessary components to duplicate operational responses of flight controls. The trainer is so designed, and operational components are so arranged, that individual controls can be observed. The components are mounted in the same relative locations as in the actual helicopter and are designed with limits of travel approximating those of the helicopter.

Physical Information:
218" x 56" x 124"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

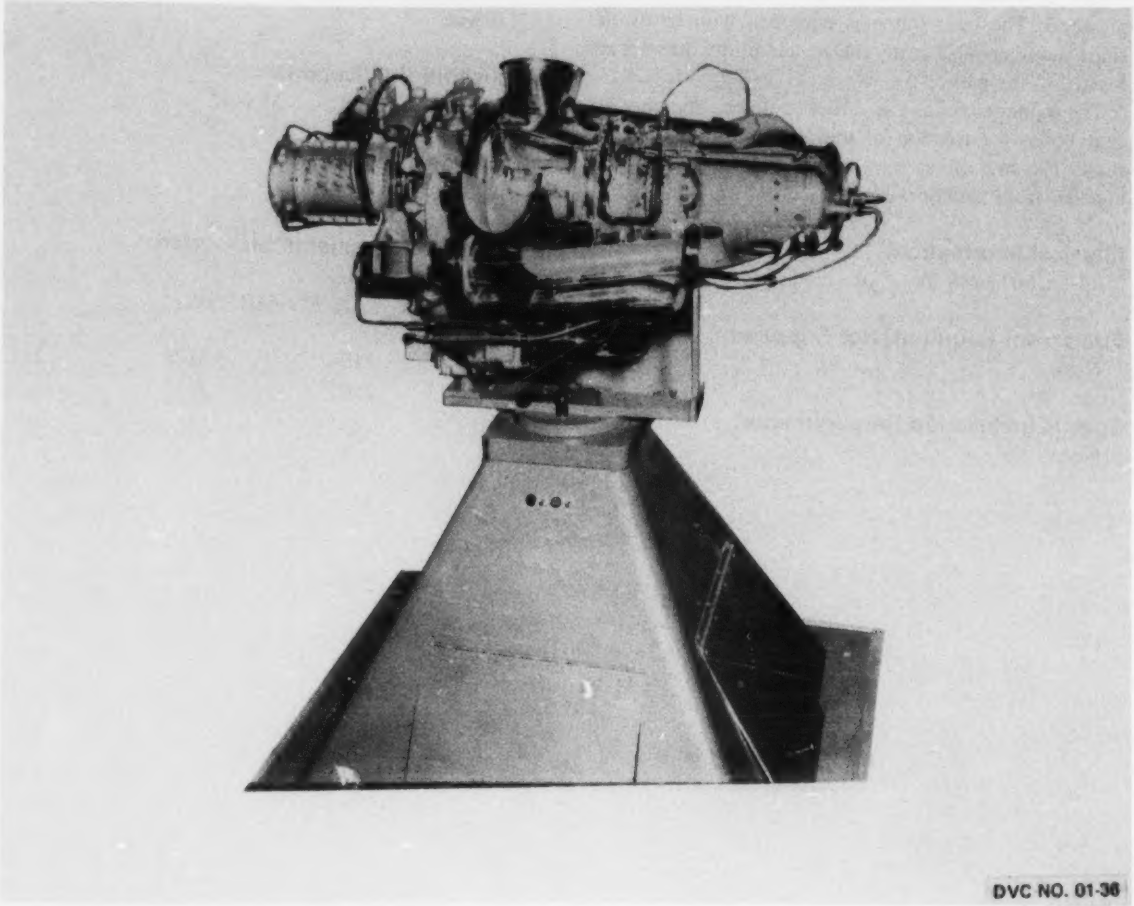
Applicable Publications:
Operation and Maintenance Manuals for AH-1G Trainer.

Reference Publications:
TM 55-1520-221 Series

OH-6A POWER PLANT T63-A-5A TRAINER

DVC 01-36

NSN 6930-01-063-7772



DVC NO. 01-36

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is used for classroom training in the support maintenance, inspection, and safety precaution courses of instruction. It provides for familiarization and maintenance instruction in the operation fundamentals of the T63-A-5A Turbine Engine used on the OH-6A Helicopter. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a scaled replica of the T63-A-5A Engine. It contains all basic engine components and accessories installed in their proper location. Components are animated, with the compressor section motorized separately from the power turbine shaft. From the sectionalized areas, one may observe the flow of air from the air inlet, through the compressor and combustion unit and power turbines, to the exhaust. All sectionalized areas having moving parts are covered with clear plastic for safety.

The construction of the trainer is primarily of molded plastic with metal reinforcements. The engine is swivel mounted and is supported by a reinforced metal base which is welded to a steel base frame covered with plywood. The base frame is equipped with hardwood skids and removable casters. Data and utility drawers are located in the base.

The trainer contains two 110-vac electric motors with gear boxes for rotation of the compressor and power shaft. The two drives may be operated individually or together from the control panel located on the base.

Physical Information:
44" x 60"; 248 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
Commercial Instruction Manual

Reference Publications:
TM 55-1520-214 Series

Training Requirements Supported:

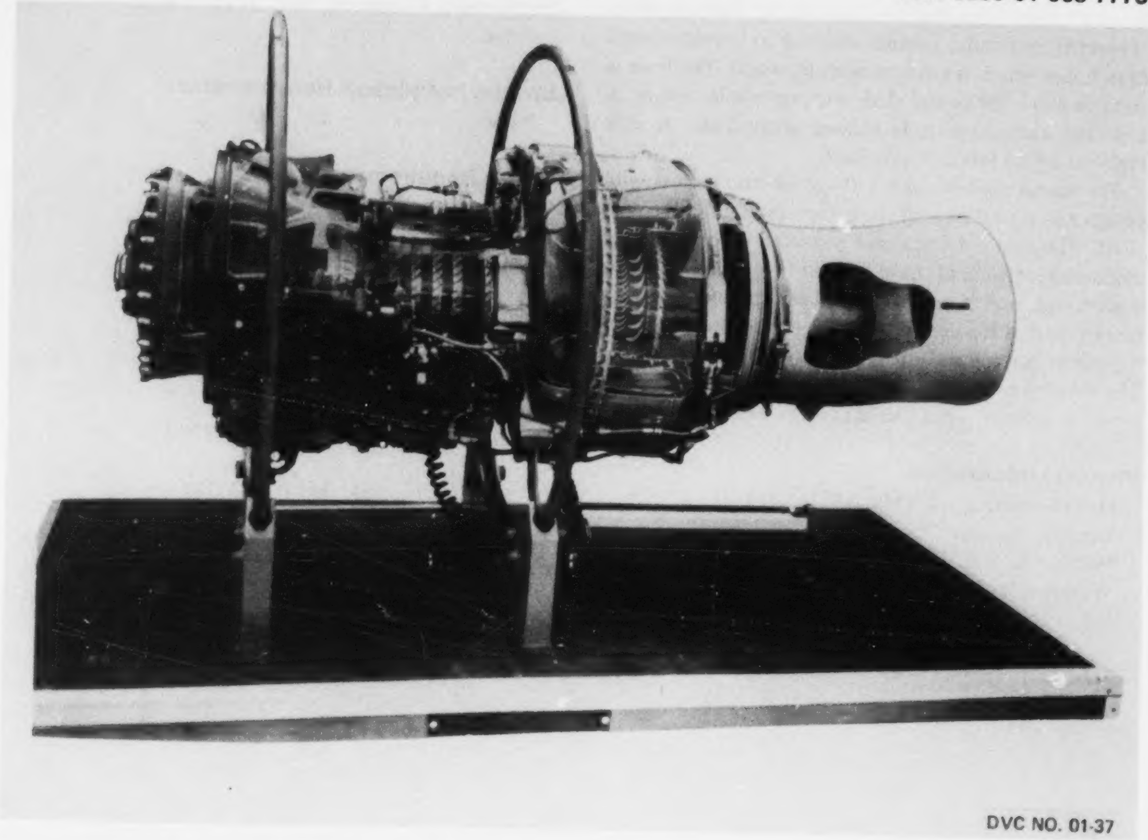
SM 551-68B Tasks

1067	2106	2108	2122
1072	2107	2113	

UH-1D POWER PLANT T53-L-11 TRAINER

DVC 01-37

NSN 6930-01-063-7773



DVC NO. 01-37

Training Category/Level Utilized:

Aviation/ Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is used for classroom training in the support maintenance, inspection, and safety precaution courses of instruction. It provides for familiarization and maintenance instruction in the operation and fundamentals of the Lycoming T53-L-11 Turbine Engine used on the UH-1D Helicopter. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a full-scale plastic replica of the T53-L-11 Engine. It contains all basic engine components and accessories installed in their proper location. The upper left-quarter of the engine is sectionalized to reveal the internal operation of the compressor, turbines, and gears. From the sectionalized areas, one may observe the flow of air from the nose air inlet, through the compressor, combustion unit and power turbines, to the exhaust at the tail cone. The mechanical drive from the power turbine, through the planetary reduction gears to the output shaft and the accessory drives, may also be observed. All sectionalized areas having moving parts are covered with clear plastic for safety.

The construction of the trainer is primarily of molded plastic and fiberglass with metal reinforcements. Only the nose gear section and the accessory section are actual engine parts. The compressor and turbine wheels are of molded plastic mounted on steel shafts. The engine is supported by tubular mounts attached to a welded steel base frame which is covered with plywood. The base is equipped with hardwood skids and removable casters. A data and utility drawer is located in the base. A dust cover of nylon fabric is provided.

The trainer contains two 110-vac electric motors with gear boxes for rotation of the compressor and the power shaft. The motor for the gas-producer function of the engine is located in the base. It drives the accessory gear, compressor, and compressor turbine. The motor for the output shaft is located in the engine tail cone. It drives the power turbine and the nose section reduction gears. The two drives may be operated individually or together from the control panel located on the base.

Physical Information:

Height—resting on skids: 54"
Length—box: 61"
Width—box: 30"
Weight—engine and stand: 510 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

None

Reference Publications:

TM 55-1520-210 Series

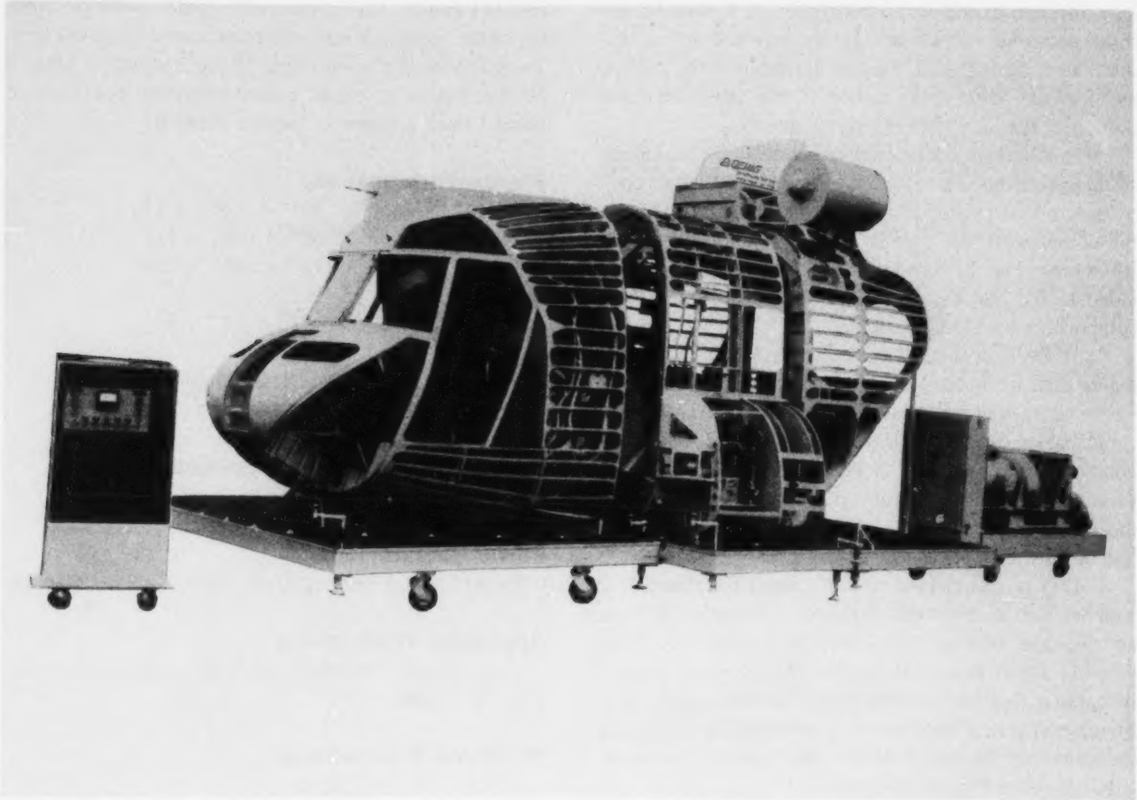
Training Requirements Supported:

SM 551-67Y Tasks

1140 1147 1149 1152
1143

CH-47C ELECTRICAL SYSTEMS TRAINER

DVC 01-46 **NSN 6930-01-063-7533**



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The CH-47C Electric Maintenance Training Unit is designed to reflect the realistic production helicopter configuration of the electrical system and the components used in this system. The integrated use of operational helicopter components, coupled with certain trainer peculiar simulating circuitry and components, together provide aircraft realism for the effective training of maintenance personnel. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The electrical system maintenance training unit utilizes the actual full-scale airframe structure of CH-47C Helicopter to display and support the components of the electrical system. It includes all the electrical and electronic circuits contained in the operational CH-47C Helicopter.

The trainer is divided into three panels (Panel I, Panel II, and the Instructor's Control Panel). To facilitate transportation or movement from one location to another with minimum effort all the panels are equipped with castering, rubber-tired wheels. Wheel jacks are incorporated on Panel I and Panel II, to prevent inadvertent moving once the trainer is located in its final location. Operational helicopter components are used throughout the trainer unless otherwise noted. Wherever possible, components and controls are located in the same relative positions as on the helicopter, and they are arranged so that individual control motions and drive rotation can be observed.

a. Panel I

(1) This panel is a longitudinally foreshortened fuselage airframe of the actual helicopter. It is divided into three sections, which are interconnected by quick-disconnect cable packs. Section 1 simulates the cockpit and forward pylon area; section 2, the cabin area; and section 3, the aft pylon and ramp areas.

(2) Although operational and simulated components of these sections are mounted in the same relative positions as on the production helicopter, distances between the components are greatly reduced, especially in the cabin area. For this reason, nameplates have been provided to indicate the helicopter station at which these components are actually located.

(3) Only those pilot and copilot controls and instruments that are needed to demonstrate operation of the electrical system are included in section 1. Helicopter cable packs, from which wires are routed to various components, have been shortened for trainer use. All avionic equipment is simulated, but wiring is routed to these components.

b. Panel II

(1) This panel is a power source for Panel I. It supplies the trainer with 3-phase, 400-cycle, 208-vac and 3-phase, 60-cycle, 220-vac, 75-A power. A 30-hp variable speed motor drives one helicopter alternator through a flexible coupling and reducing gear box. Simulation of helicopter power is obtained by connecting the output of the motor-driven alternator to two simulated alternators located on Panel I.

(2) The speed of the drive unit is controlled from either the Instructor's Control Panel, or from the beep trim switches and the No. 1 engine condition level in the cockpit of Panel I.

c. Instructor's Control Panel. The Instructor's Control Panel contains all the controls necessary for the operation of Panels I and II, and for the insertion of faults into the electrical system. Four 50-foot cables and one 75-foot cable are provided to interconnect this panel with Panels I and II. The length of the cables allow positioning of the console at convenient locations for instruction. To minimize the noise level in the instruction area, a 50-foot extension cable is used to permit operation of Panel I from a remotely located Panel II.

Physical Information:

Panel I (Section 1): 108" x 126" x 139"
Panel I (Section 2): 60" x 168" x 111"
Panel I (Section 3): 72" x 168" x 154"
Panel II: 96" x 36" x 55"
Instructor's Console: 27" x 24" x 54"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Facility requirements: 220 vac, 75 A, 3-phase, 60 cycle

Applicable Publications:

Commercial Handbook of Operation Instructions: CH-47C - 2000

Reference Publications:

TM 55-1520-227 Series

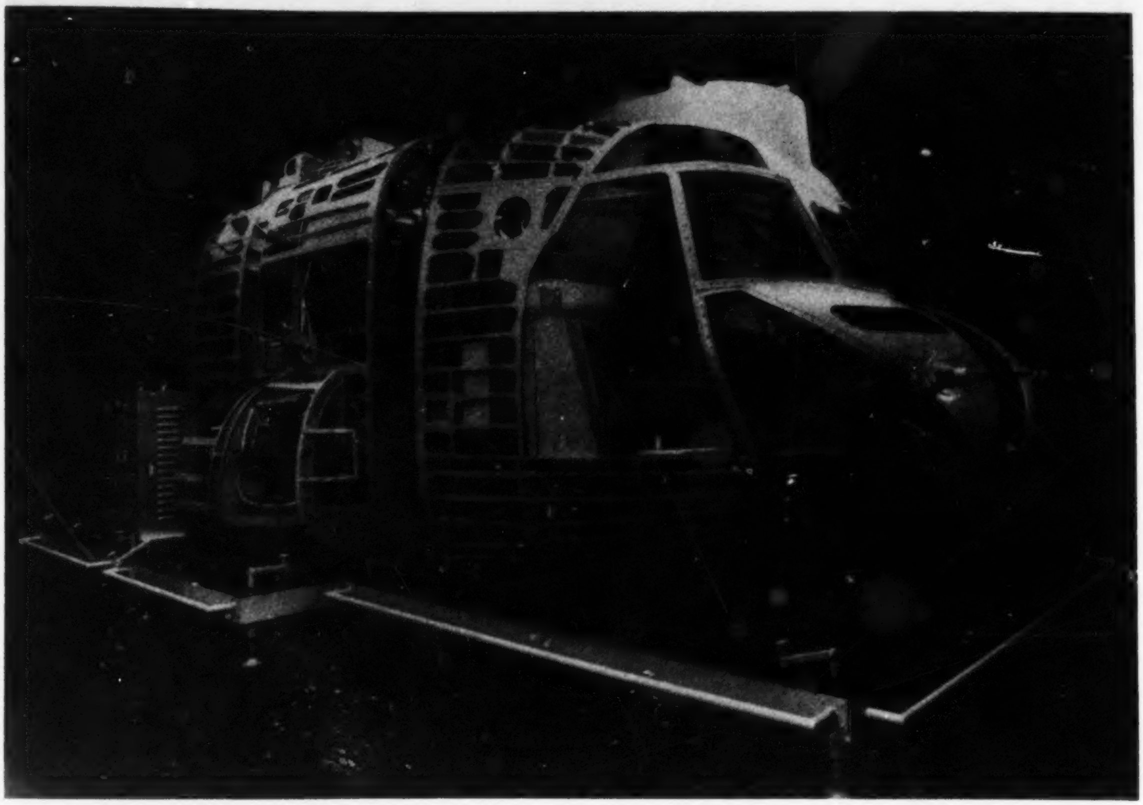
Training Requirements Supported:

SM 551-68F Tasks

1003	2005	2008	2086
1067			

CH-47D ELECTRICAL SYSTEMS TRAINER

DVC 01-46A **NSN None**



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (Limited production)

Purpose of Trainer:

The CH-47D Electrical Systems Trainer is designed to reflect the realistic production helicopter configuration of the electrical wiring and electrical components. The use of minimal operational components integrated with trainer-peculiar simulated components provide aircraft realism for the effective training of maintenence personnel.

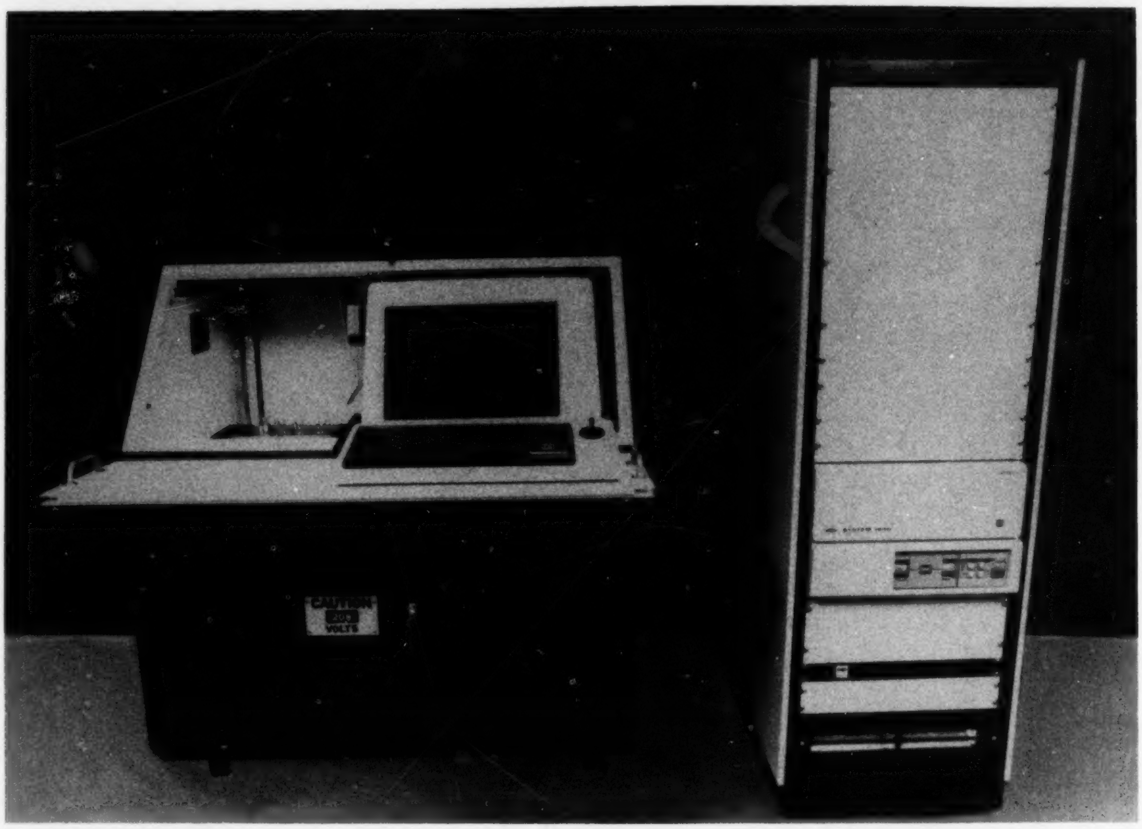
Functional Description:

The trainer consists of four major components: Instructor's Console, Computer Equipment Cabinet, Airframe, and Power Source. To facilitate transportation with minimum effort, these are equipped with swivelled self-locking, rubber tired casters. Levelling screw jacks attached to the trainer base provide stability when it is positioned for use.

a. The Instructor's Console contains the primary electronic controls for the trainer, e.g. trainer control panel, hand-held terminal, CRT screen, computer keyboard, graphics controller, and power supplies. A cable interfaces the console to the Airframe.

b. The Computer Equipment Cabinet is connected to the Instructor's Console by two power cords and two data records. It houses the main computer, a Winchester disk drive, and a dual floppy disk drive.

DVC 01-46A



c. The Airframe is comprised of three sections: Section 1 simulates the cockpit and forward cabin area, Section 2 the cabin, and Section 3 the aft cabin and ramp area. The Airframe is shortened to eliminate space that is unnecessary for the training mission and maximize the classroom space that is available.

d. Power to drive the trainer is converted from a line-fed 208 vac 3-phase source by the Trainer Power Supply. All trainer power is provided from this source, eliminating the requirement for a mechanical vari-drive unit to drive the generators. 24 vdc power requirements are met in the same manner.

Physical Information:

Instructors Console: 48" x 34" x 54"
Computer Equipment Cabinet: 23" x 31" x 70"
Airframe: (Section 1): 108" x 126" x 139"
(Section 2): 60" x 168" x 111"
(Section 3): 72" x 168" x 154"
Power Source: 23" x 15" x 38"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
Facility: 208 vac, 75 A, 3-phase, 60 Hz

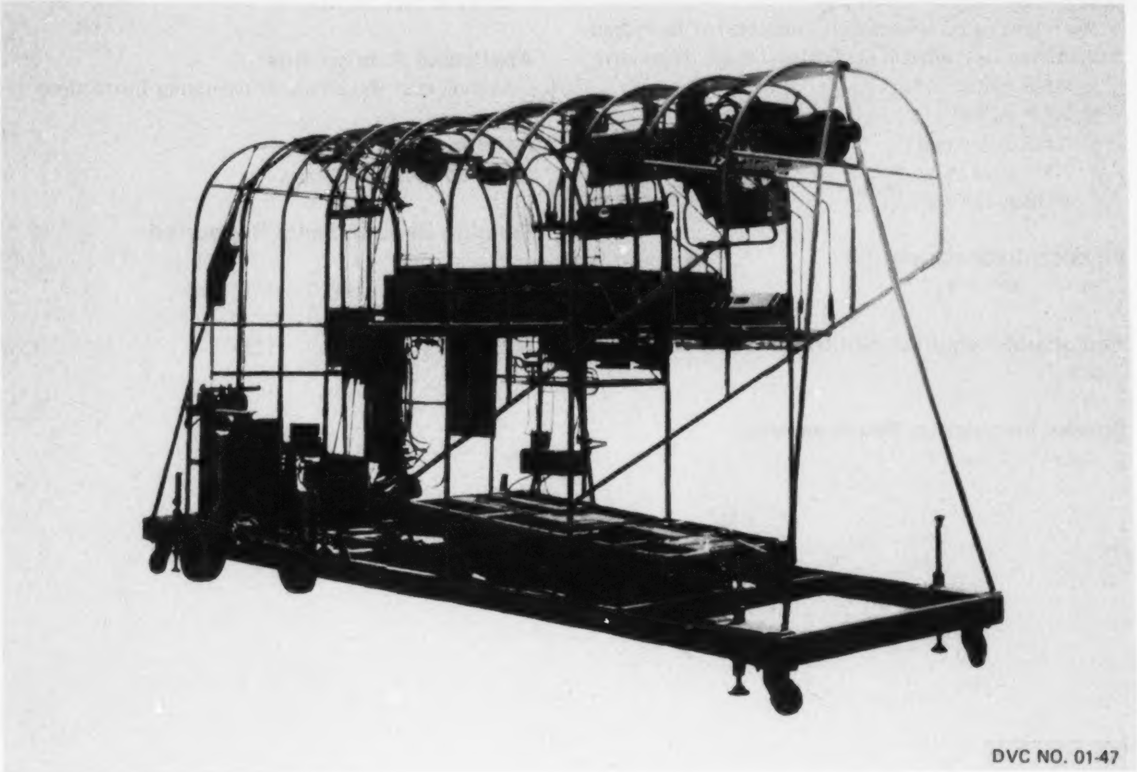
Applicable Publications:
TM 1-6910-708-14&P

Reference Publications:
TM 55-1520-227 series

Training Requirements Supported:
MOSC 68F

CH-47 SERIES TUBULAR UTILITY HYDRAULIC SYSTEM TRAINER

DVC 01-47 **NSN 6930-01-063-7532**



DVC NO. 01-47

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to train and instruct operational and maintenance personnel on the CH-47 Series Helicopter, and to dynamically demonstrate the theory and operation of the tubular hydraulic system. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is of tubular frame construction, mounted on a base of steel members, with swivel casters and integral jacking provisions.

Except for longitudinal and lateral foreshortening, the trainer has been designed full-scale as far as practicable. All components on the trainer are located as closely as possible to their respective positions on the representative aircraft except the winch control valves, which are mounted outboard of the winch in place of being inboard of the winch as on the aircraft. The cable-block assembly storage provision is on the left-hand side of the trainer instead of being under the winch control valves. Full operative aircraft components are used throughout as far as practicable. Operational characteristics differ in the following areas:

a. The hydraulic pressure transmitter is inoperative and a direct pressure reading is provided.

b. The hydraulic oil cooler fan motor is inoperative.

c. The cargo hook is simulated, providing the hydraulic portion of the system only. The aircraft cargo hook actuating cylinder is displayed and used on the trainer to close the simulated cargo hook.

d. APU is simulated.

e. The cargo ramp is simulated.

DVC 01-47

f. The hydraulic power supply is designed to deliver fluid at a pressure of 2,000 psi.

The following components are connected to the hydraulic system and are wired as applicable, but are inoperative:

a. AGB motor
b. AGP motor
c. APU motor pump
d. APU state valve
e. AGB motor valve

Physical Information:
240'' x 90'' x 117''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
220/110 vac; 28 vdc

Applicable Publications:
Commercial Handbook of Operating Instructions

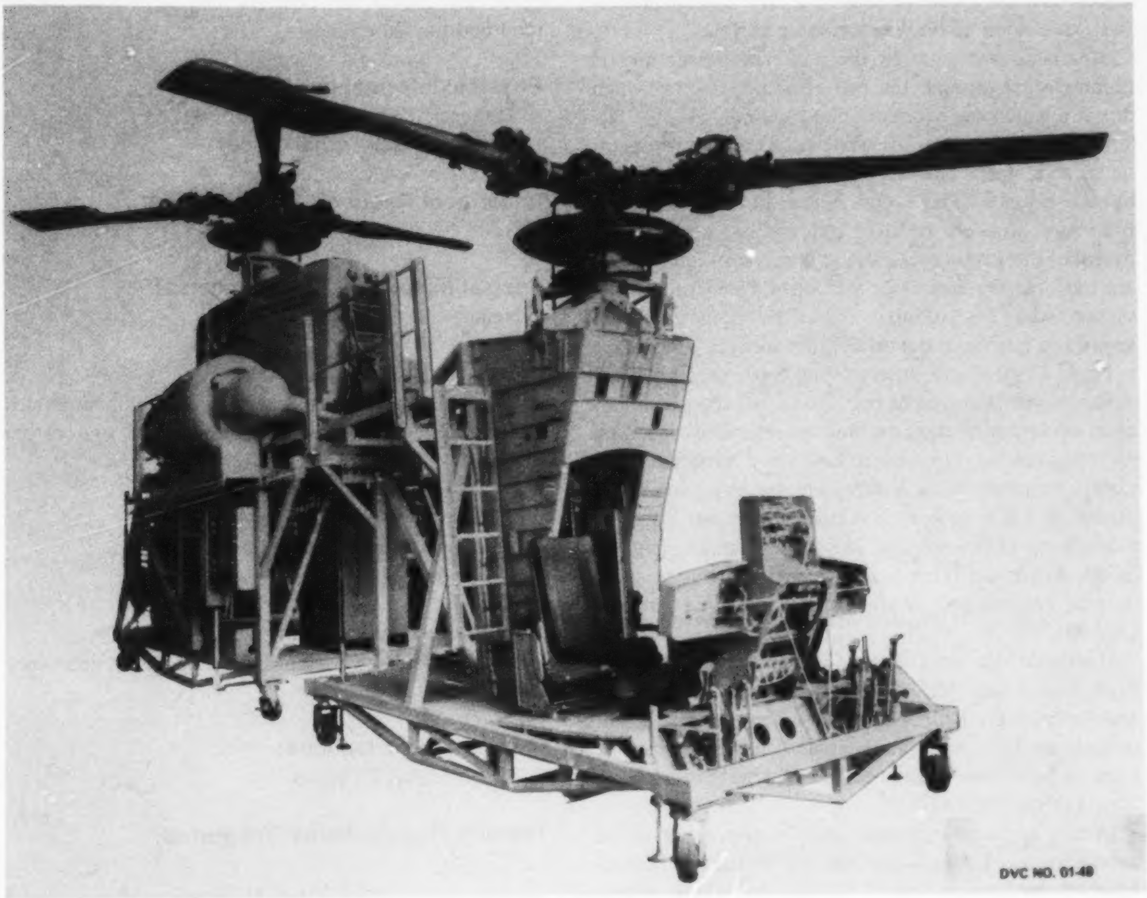
Reference Publications:
TM 55-1520-209 Series

Training Requirements Supported:

SM 551-67U Tasks		
1122	1125	1376

CH-47C COMPOSITE TRAINER

DVC 01-49 **NSN 6930-01-063-7531**



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The Composite Training Unit is designed to support maintenance training on the CH-47C "Chinook" Helicopter. It offers a realistic environment for presenting the starting, powertrain, rotary wing, and flight control systems, including relative component locations, operation, and repair of the production helicopter. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The Composite Maintenance Training Unit is divided into two sections to facilitate transportation or movement from one location to another. Each section is supported on fully castering, rubber-tired wheels. Screwjacks are also incorporated to prevent inadvertent moving of the trainer. The two sections are joined when the trainer is in use. Operational helicopter components are used throughout the unit unless otherwise noted. Whenever possible components and controls are located in the same relative positions as on the helicopter. They are arranged so that individual control motions and drive rotation can be observed. Selected assemblies are sectionalized or cut away to show internal construction details.

Two independently operated 5-hp motors are used to drive the powertrain system at a relatively low rpm. This arrangement, controlled from the cockpit or the Instructor's Control Panel, represents engine operation. Each installation consists of a simulated power turbine, driven by one 5-hp motor, and an axial/centrifugal compressor driven by a 1/4-hp motor. The dual drive system simplifies explanation of the free turbine principle.

Simulated operation of the auxiliary power unit is accomplished through the use of a 5-hp motor which drives a helicopter hydraulic motor-pump.

Powertrain System: The powertrain consists of operational helicopter components with the exception of the turbine engines. The speed of the powertrain ranges from approximately 10 to 15 rpm and can be regulated by either the instructor or the student. Instructor inputs are made at the Instructor's Control Panel on the aft section, while student inputs utilize the engine condition levers and beep trim controls in the forward section.

Flight Control and Rotary Wing Systems: The flight control system consists of operational helicopter components which can be rigged within the tolerances specified for the helicopter. Operational helicopter components are used in the rotary-wing system, with the exception of the blades, which have been shortened for trainer use. The rotary wing blades respond to various control inputs as on the helicopter. One blade is sectionalized to show internal construction details including the weight balance-box.

Hydraulic System: The components of the trainer dual flight control and utility hydraulic systems are functional and duplicate the helicopter systems in operation. Components are identified by nameplates; those that deviate from the helicopter configuration are identified as "NOT USED ON AIRCRAFT."

In each of the two sections, the base frame consists of structural steel channels and welded tubular steel which supports the forward and aft pylons. Aluminum grating walkways and steel ladders provide access to the forward and aft pylons.

The engine transmission and drive motor mounts are supported on welded steel beams. The forward and aft pylons and cockpit area consist of helicopter components, modified for trainer use.

Physical Information:

Section I: 177" x 83" x 153"
Section II: 163" x 100" x 204"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

To operate the various systems which are incorporated in the training unit, the following power sources are required:

a. 220 vac, 3-phase, 400 cycle
b. 220 vac, 3-phase, 60 cycle
c. 110 vac, single-phase, 60 cycle
d. 28 vdc

Applicable Publications:

Commercial Handbook of Operating and Maintenance Instruction Manual

Reference Publications:

TM 55-1520-227 Series

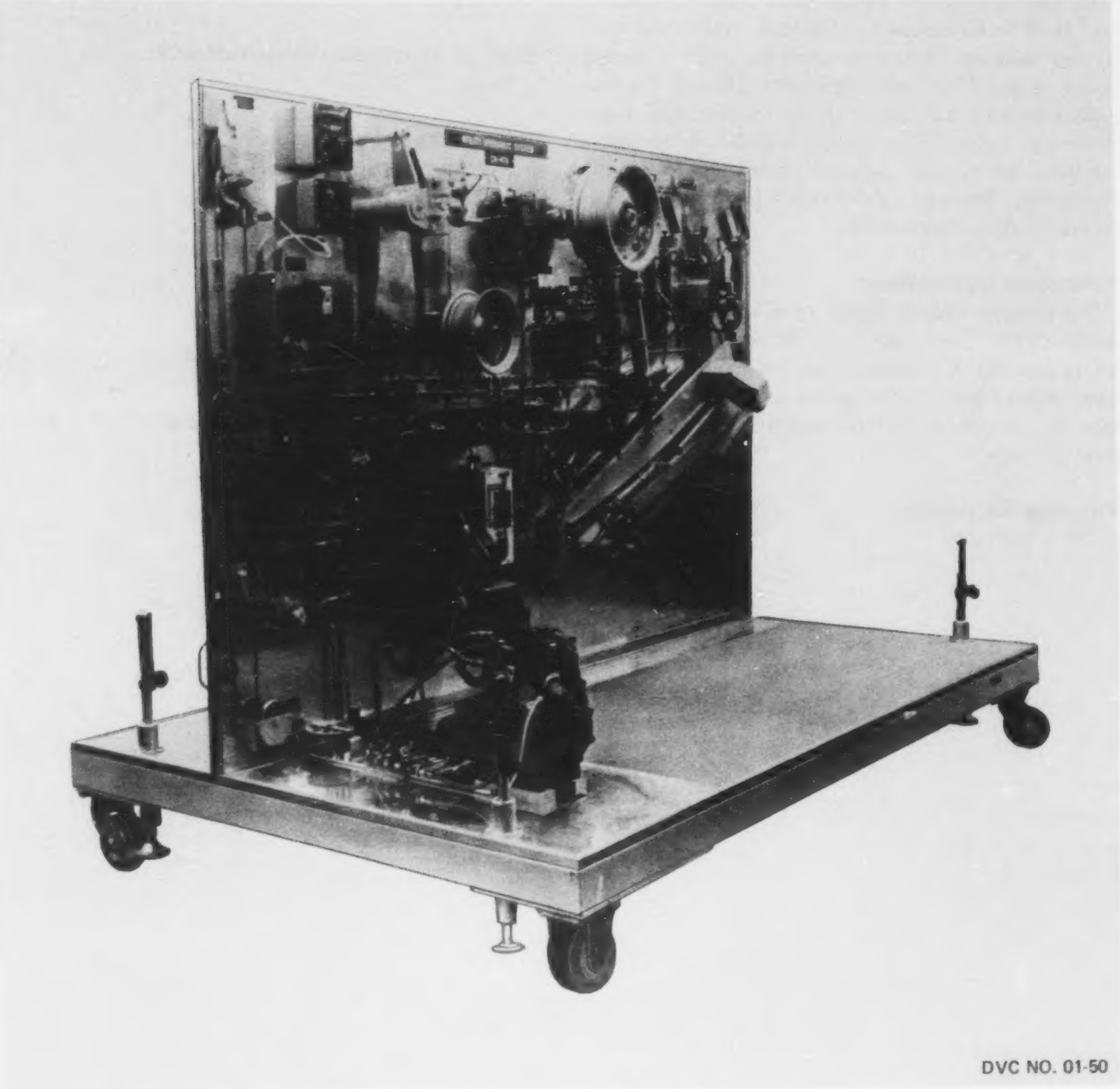
Training Requirements Supported:

SM 551-67U Tasks

1155
1271
1301
1312
1314
1376

CH-47 SERIES HYDRAULIC BOARD TRAINER

DVC 01-50 **NSN 6930-01-063-7530**



DVC NO. 01-50

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

DVC 01-50

Purpose of Trainer:

For classroom use to support maintenance training on the CH-47 Series Helicopter. The trainer provides a realistic environment for demonstrating the utility hydraulic system of the CH-47 Series Helicopter. The use of operational equipment and system simulation provides a comprehensive means of instructing installation, removal, servicing, adjustment, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a panel display, upon which are mounted standard CH-47 Helicopter hydraulic components, which are operational. Components are interconnected in the same relative positions as on the aircraft. The panel is mounted on a metal platform with the base of the platform on casters.

Physical Information:

72" x 96" x 72"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

220 vac, 3-phase, 60 cycle
110 vac, 60 cycle

Applicable Publications:

Commercial manuals

Reference Publications:

TM 55-1520-209 Series

Training Requirements Supported:

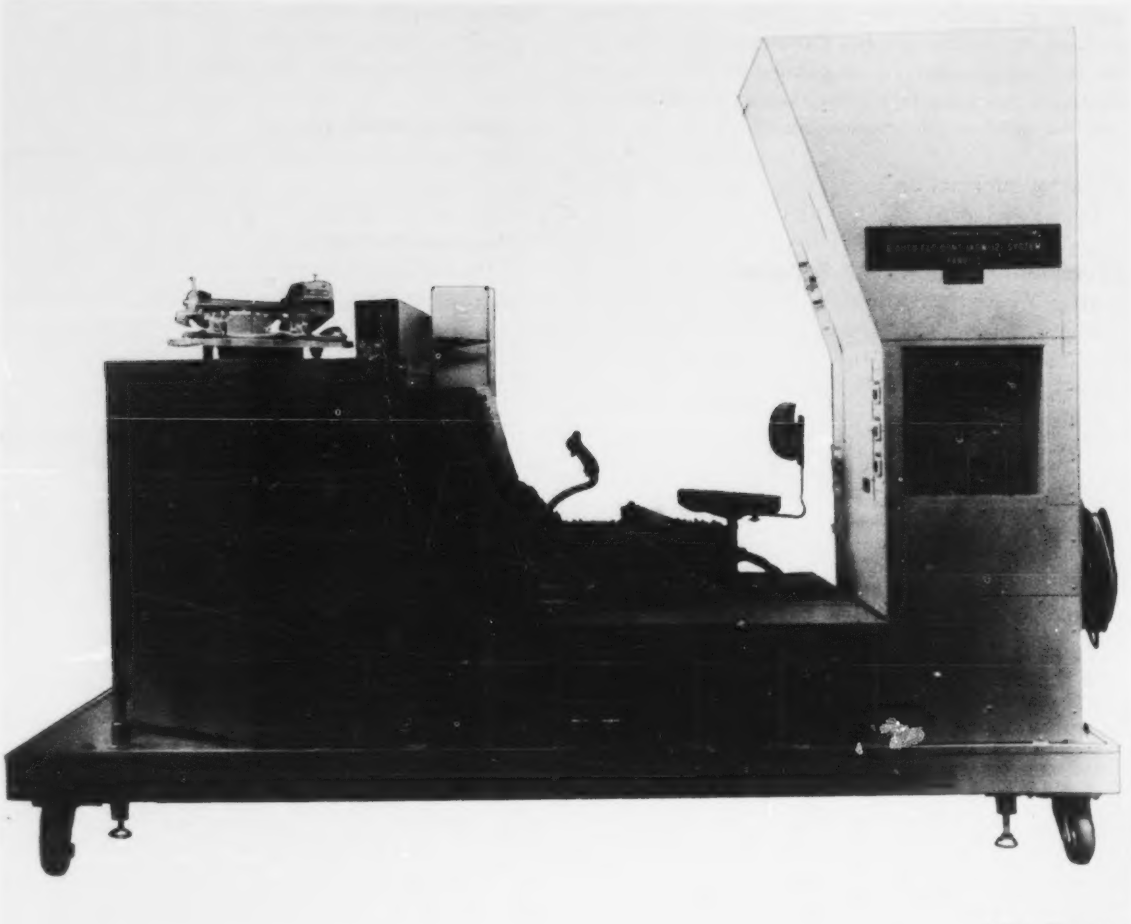
SM 551-67U Tasks

1125 1127 1376

CH-47A STABILITY AUGMENTATION SYSTEM AND AUTOMATIC FLIGHT CONTROL (ASW-12) SYSTEM TRAINER

DVC 01-51

NSN 6930-01-064-4423



DVC NO. 01-51

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For use in the classroom to support maintenance training and to provide a realistic environment for presenting the Stability Augmentation System (SAS) and the Automatic Flight Control System (AFCS) of the CH-47A Helicopter.

DVC 01-51

Functional Description:

The trainer is completely operational and depicts the entire Stability Augmentation System (SAS) and the Automatic Flight Control System (AFCS). It consists of two consoles mounted on a metal platform with the base of the platform on casters. A set of controls and a seat are located between the two consoles with the instrument panel mounted on the front console.

Physical Information:

144'' x 96'' x 10''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

220 vac, 3-phase, 60 cycle
110 vac, single-phase, 60 cycle

Applicable Publications:

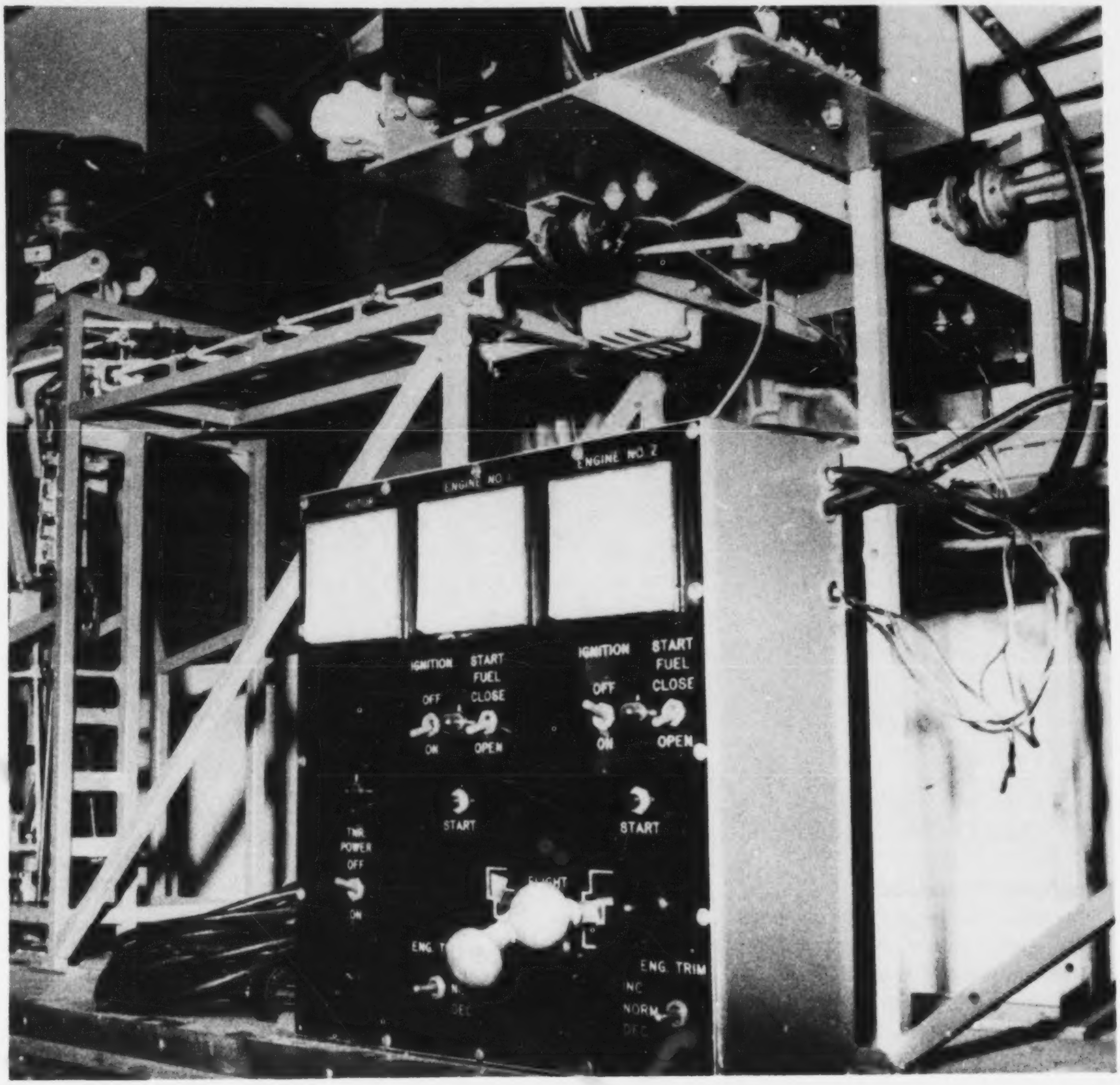
Commercial Handbook of Operating and Maintenance Instructions

Reference Publications:

TM 55-1520-209 Series

CH-47 FLIGHT CONTROL SYSTEM TRAINER

DVC 01-52 NSN 6930-01-063-7529


ENGINE NO 1
ENGINE NO 2
IGNITION
START
FUEL
CLOSE
OFF
ON
OPEN
IGNITION
START
FUEL
CLOSE
OFF
ON
OPEN
START
START
TNG
POWER
OFF
ON
FLIGHT
ENG TRIM
INC
NORM
DEC

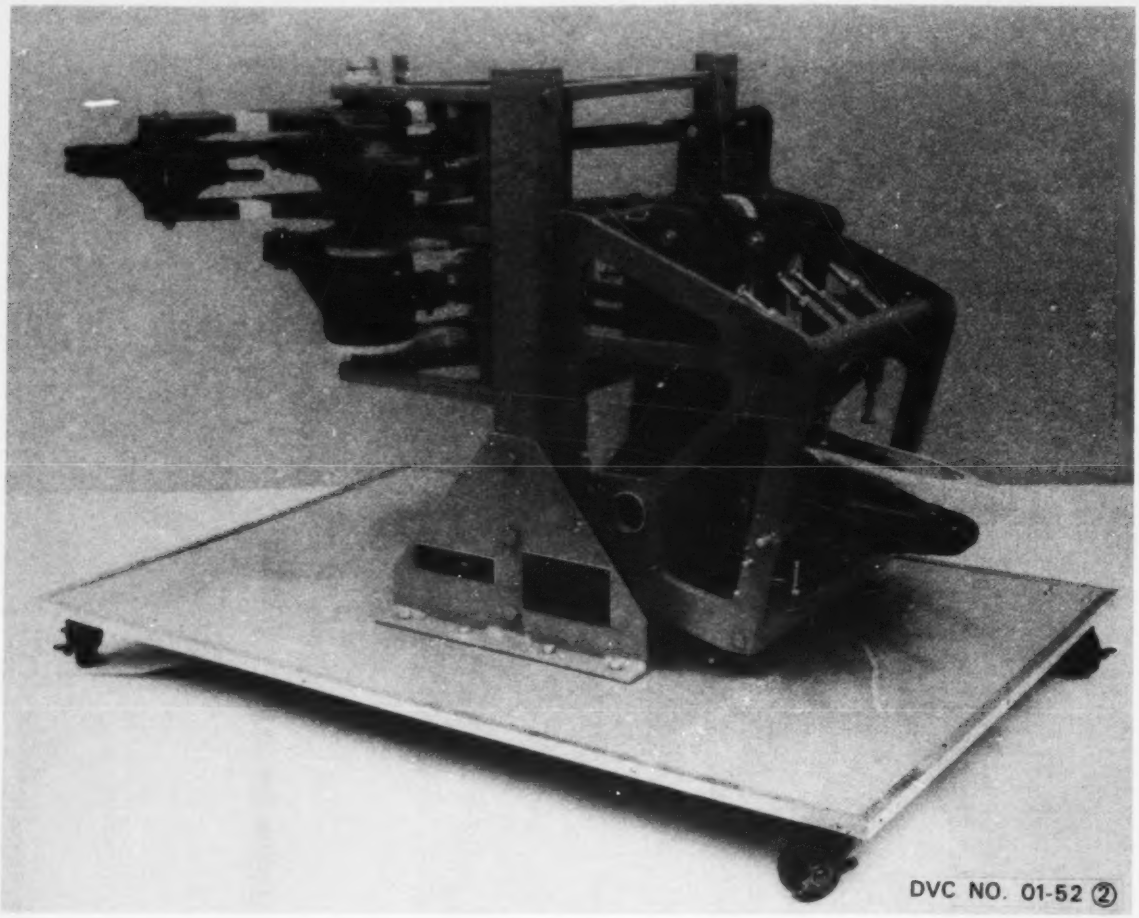
Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to support maintenance training on CH-47 Helicopter. The trainer provides a realistic environment for the instruction of maintenance personnel in the first and second stage mixing units of the CH-47 Flight Control System. The specific training requirements supported are shown following the descriptive data.

DVC 01-52



DVC NO. 01-52 ②

Functional Description:

The trainer is composed of two units as follows:

a. Unit 1 consists of flight controls from the cockpit through the closet area and the forward, aft, rotor heads, and stub blades. All components, pushrods, activators, bell cranks, etc., are representative of the CH-47 Helicopter, though reduced in size. The structure is welded steel tubing mounted on an aluminum-framed base.

b. Unit 2 consists of a full-scale mockup of the first and second stage mixing units of the flight control system. The mockup is fully operational for use in demonstrating the theory of operation and kinematics of the flight controls, mixing stages, and components.

Physical Information:

Unit 1: 26" x 62" x 41"
Unit 2: 40" x 40" x 30"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

None

Reference Publications:

TM 55-1520-209 Series

Training Requirements Supported:

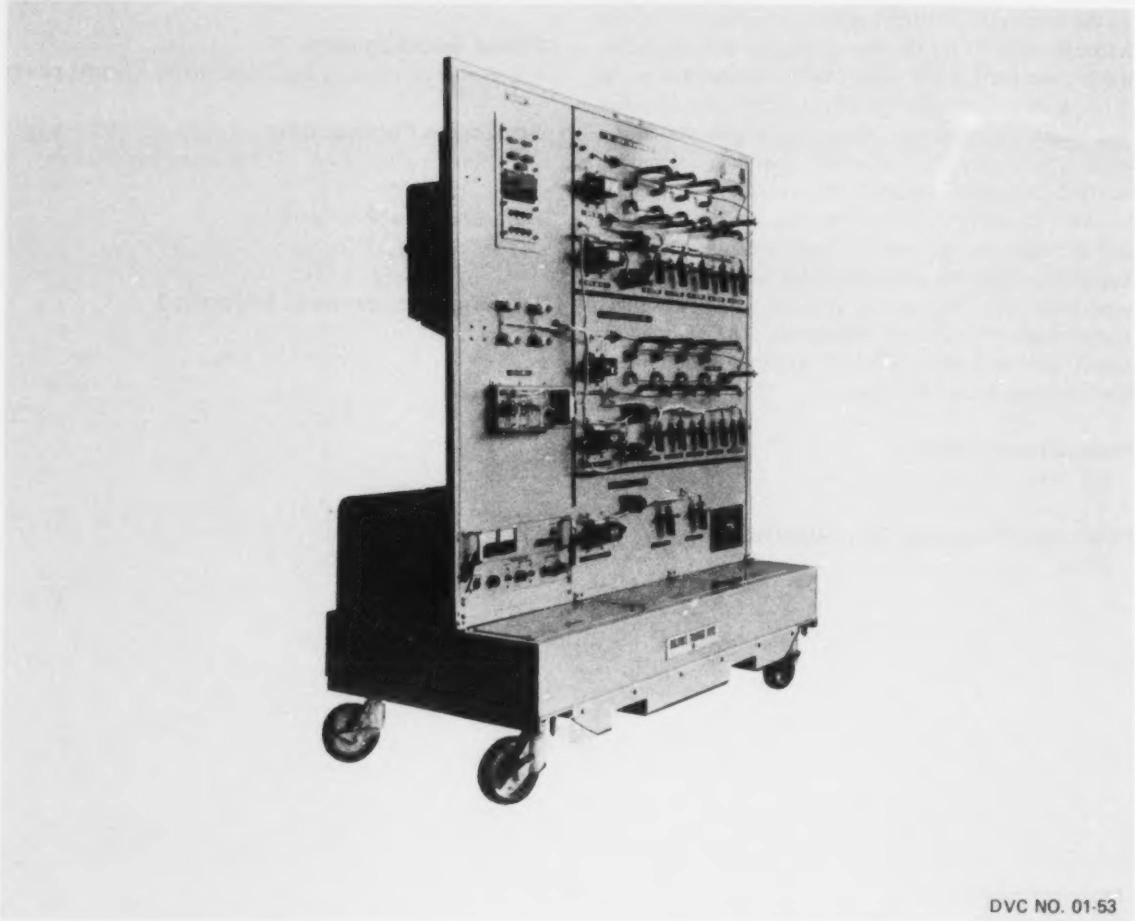
SM 551-67U Tasks

1337	1373	2405	2407
1371	1376	2406	

TRAINER, FIRE DETECTION SYSTEM: CH-54A

DVC 01-53

NSN 6930-00-930-7657



DVC NO. 01-53

Training Category/Level Utilized:
Aviation/Level 1

Logistics Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to support maintenance training for the Fire Detection System on the CH-54A Helicopter. The trainer provides a demonstration panel that depicts the operation, servicing, and adjustment of the Fire Detection System. The specific training requirements supported are shown following the descriptive data.

DVC 01-53

Functional Description:

The trainer is a mobile, panel-type display unit containing the continuous wire and optical surveillance-type fire detection systems for the No. 1 engine, No. 2 engine, and the auxiliary power plant (APP) installations on the CH-54A Helicopter. The systems are displayed on a vertical panel, mounted to a base. The trainer contains a solid-state power supply which produces dc power required for system operation. A power monitor panel is provided to monitor and control the facility power as well as trainer internal power. The trainer also contains a malfunction panel to allow the instructor to inject simulated faults into the aircraft systems. Eight simulated malfunctions are built into the trainer. The malfunction panel is provided with a key-lock cover to prevent operation by unauthorized personnel.

Physical Information:

30'' x 65'' x 72''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, 60 cycle, 4 kva single-phare external power

Applicable Publications:

Commercial Handbook of Operating Instructions

Reference Publications:

TM 55-1520-217 Series

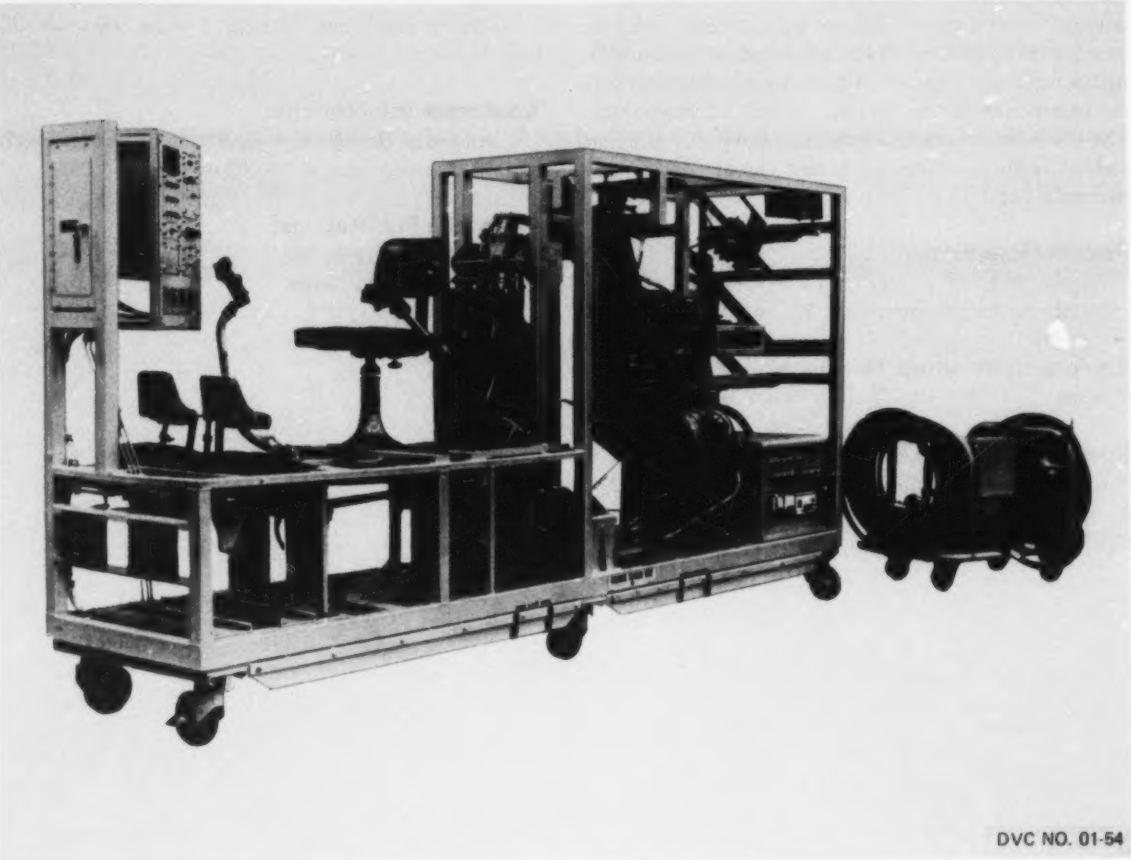
Training Requirements Supported:

SM 551-67X Tasks

1337 2157 2217 2582

TRAINER, FLIGHT CONTROL SYSTEM: CH-54A

DVC 01-54 NSN 6910-00-930-7666



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to provide a realistic environment for an instructor to familiarize aviators, crewmen, and maintenance personnel in the operation of the CH-54A Helicopter Flight Control System.

Functional Description:
The trainer is a two-piece unit consisting of a mobile hydraulic power cart and a mobile, three-dimensional, frame-type display unit. The display unit contains a simplified Flight Control System utilizing operational helicopter components. These include the fore and aft servocylinder, tail rotor servocylinder, AFSC servo unit, aviators cyclic stick, collective stick, and an aft remote cycle stick. A trainer-peculiar, solid-state power supply is used to generate the dc power required for trainer operation. A power monitor panel is provided to monitor and control facility- and trainer-generated power. A malfunction panel is provided to allow the instructor to inject simulated faults into the flight control system. The malfunction panel incorporates a keylock cover to prevent

DVC 01-54

operation by unauthorized personnel. Simulated AFCS inputs are provided to demonstrate the effect of AFCS on the flight control system. Trainer-peculiar gages are provided to indicate first stage, second stage, and utility hydraulic system pressure. A fold-down step is built into the trailer to assist the operator on and off the trainer. The power cart contains a hydraulic pump driven by an electric motor, and the associated electric cables and hydraulic lines.

Physical Information:

Display unit: 30'' x 150'' x 72''
Mobile hydraulic power cart: 33'' x 40'' x 31''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Classroom with minimum dimensions of 480'' x 360'' x 120'' high. Hydraulic power cart should be located outside classroom because of noise level.

Power Requirements:

Display unit: 110 vac, single-phase, 60 cycle, 6 kva
Hydraulic power cart: 220 vac, 3-phase, 60 cycle, 22 kva

Applicable Publications:

Commercial Handbook of Operating Instructions with Repair Parts and Special Tools List

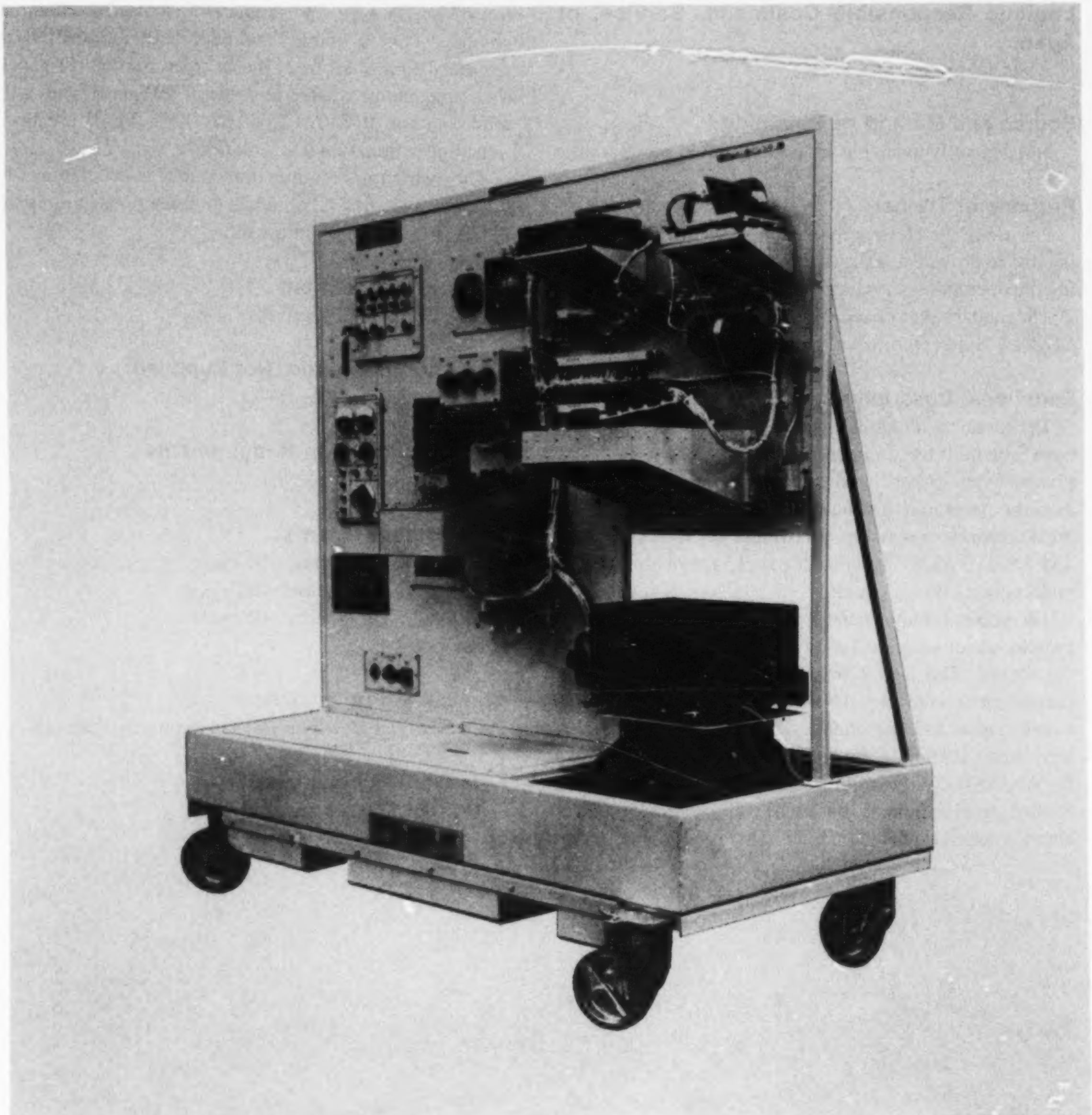
Reference Publications:

TM 11-1520-217 Series
TM 11-6615-241 Series

TRAINER, SECONDARY AUTOMATIC FLIGHT CONTROL SYSTEM: CH-54A

DVC 01-55
AN/ASW-29

NSN 6930-00-930-7658



DVC NO. 01-55

DVC 01-55

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

AVSCOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For use in the classroom to support maintenance training and to provide a realistic environment for demonstrating the operation, servicing, and adjusting the AN/ASW-29, Secondary Automatic Flight Control System, of the CH-54A Helicopter.

Functional Description:

The trainer is a mobile, panel-type unit consisting of a base assembly with upright display panel, a utility (external) power panel and external power cable, a power monitor panel, an instructor's control panel, a circuit breaker panel, a synchro transmitter (SN-409/ASW-29 and SN-410/ASW-29) control panel, a turntable, and a malfunction control panel.

The power monitor panel provides for application and monitoring of external facility power being supplied to the trainer. The instructor's control panel provides for simulation of helicopter AN/ASW-29 flight controls, attitude changes, and yaw changes. The circuit breaker panel simulates a portion of the helicopter circuit breaker panel for AN/ASW-29 operation. The synchro transmitter and control panel simulates the pitch, roll, or collective synchros installed on the helicopter. This panel contains two SN-409/ASW-29 synchros and one SN-410/ASW-29 synchro.

A turntable with mounted amplifier (Electronic Control AM-4808/ASW-29) simulates helicopter heading rate change. The turntable can be locally controlled or remotely controlled from the instructor's control panel. The table can be rotated at a rate of 90° per minute with total rotation of 130° (+65°..0..-65°). Stops are positioned at extreme ends of rotation.

The instructor's malfunction control panel contains 12 different switches to simulate malfunctions within the AN/ASW-29 flight control set.

Physical Information:

72" x 30" x 72";460 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, single-phase, 60 cycle
110/220 vac, 3-phase, 400 cycle
220 vac, single-phase, 60 cycle
28 vdc

Applicable Publications:

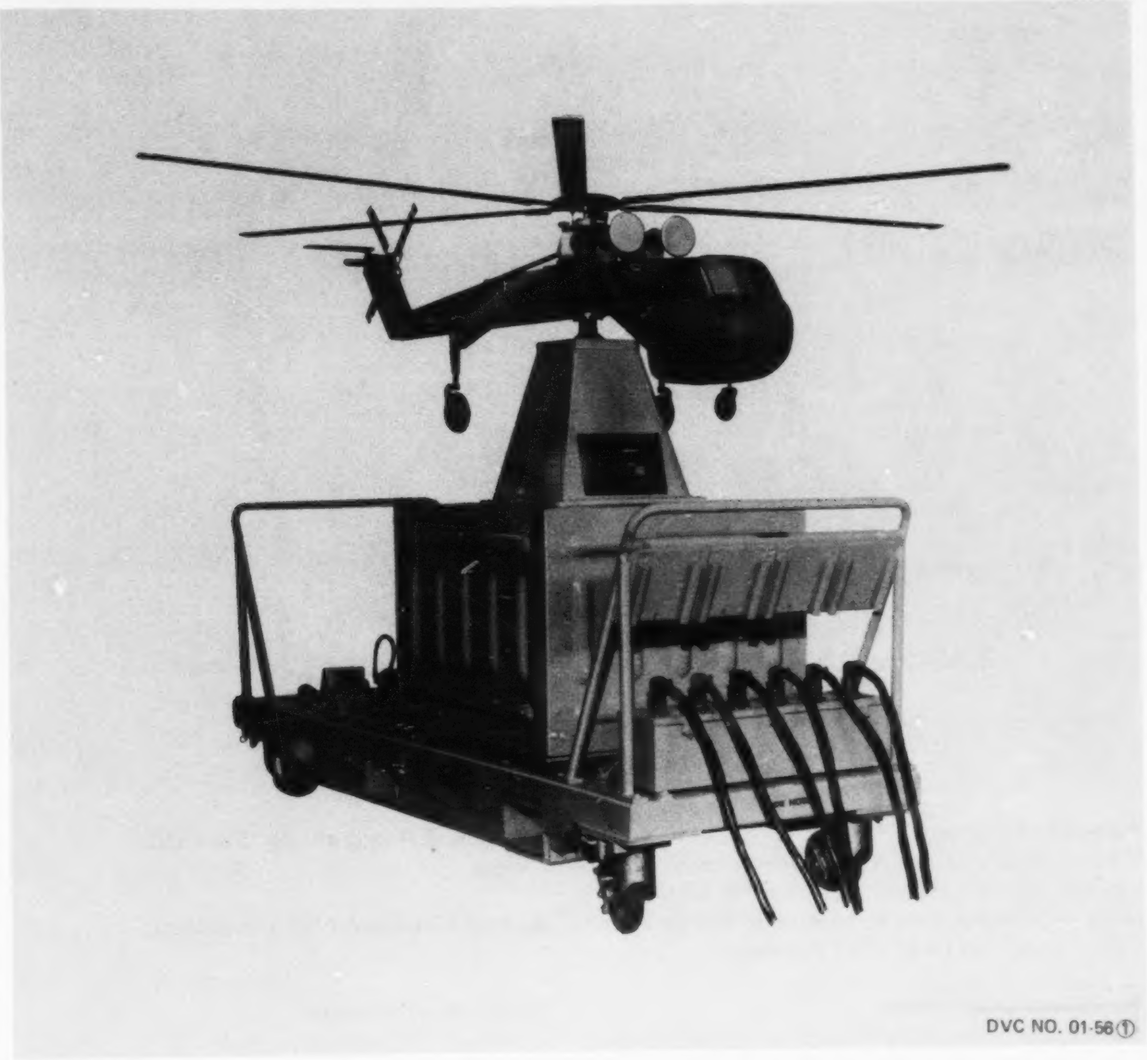
Commercial Handbook of Operating Instructions

Reference Publications:

TM 55-1520-217 Series

TRAINER, PRIMARY AUTOMATIC FLIGHT CONTROL SYSTEM: CH-54A

DVC 01-56 **NSN 6930-00-930-7659**



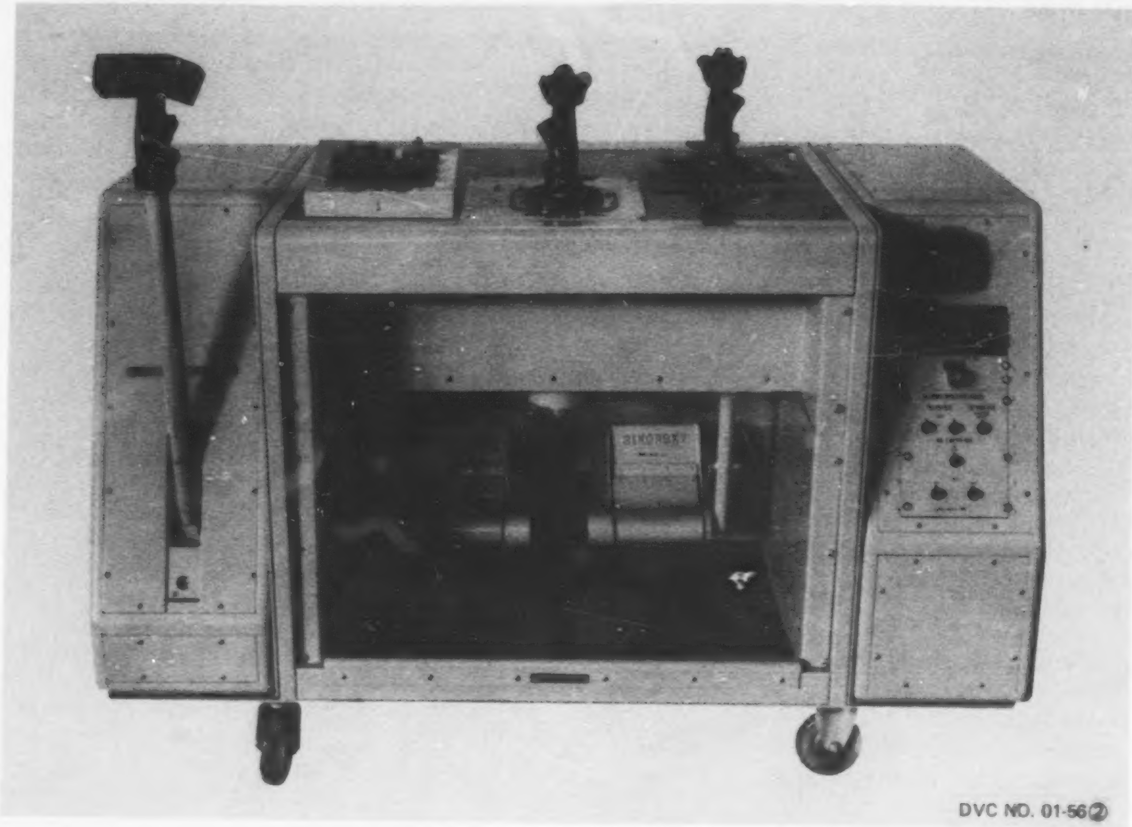
DVC NO. 01-56①

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

DVC 01-56



DVC NO. 01-56②

Purpose of Trainer:

For use in the classroom to support maintenance training and to provide a realistic environment to demonstrate operation, servicing, and adjustment of the Primary Flight Control System on the CH-54A Helicopter.

Functional Description:

The trainer is completely dynamic with simulated main and tail rotor blades, cyclic and collective sticks, and rudder pedals. Servo motors are used in lieu of hydraulic servos. The model and rotor blades will respond to control inputs of the AFCS. For insertion of typical troubles into the system, a panel of 24 switches is provided. The model is mounted on a ball joint with electrical motors to actuate pitch, roll, and yaw.

Physical Information:

Main unit: 96'' x 30'' x 72''
Power console: 70'' x 29'' x 40''
Instructor's console: 55'' x 29'' x 40''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, single-phase, 60 cycle
110/220 vac, 3-phase, 400 cycle
220 vac, single-phase, 60 cycle
28 vdc

Applicable Publications:

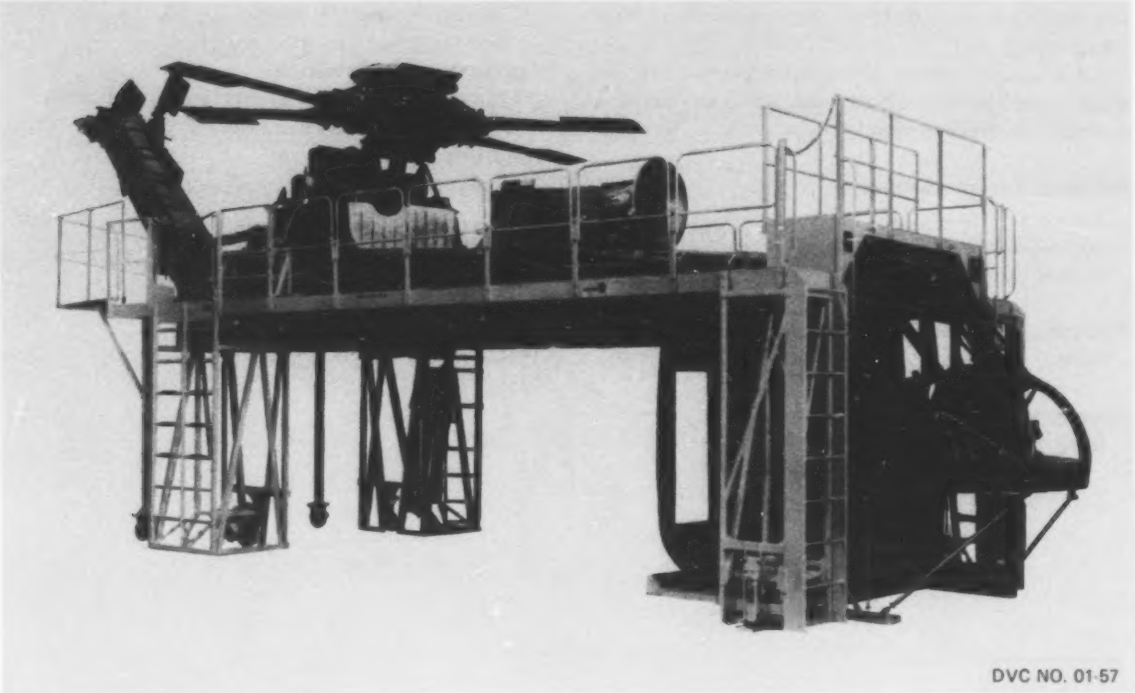
Commercial Handbook of Operating Instructions

Reference Publications:

TM 11-1520-217 Series

TRAINER, AIRCRAFT SYSTEMS: CH-54A

DVC 01-57 **NSN 6910-00-930-7660**



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

AVSCOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is used to provide a realistic environment for the instruction of maintenance students in CH-54A Helicopter systems and system components. This training aid is used to demonstrate installation, removal, operation, servicing, and adjustment of power plant, power train, flight control, and associated hydraulic systems. The specific training requirements supported are shown following the descriptive data.

Functional Description:

This trainer utilizes operational aircraft components with the exception of the turbine engines. One simulated engine is provided with mounting provisions for the second engine. Speed of the power train is at a low rpm to allow for classroom instruction. The training aid includes the following functional systems which duplicate aircraft operations:

a. Power Plant System. One simulated engine with accessories and components. A dummy APP with clutch and shaft installation is also provided.

b. Power Train System. Main gear box, tail drive shaft (2 sections only), intermediate gear box, tail gear box, main rotor head, and tail rotor head are provided.

c. Flight Controls. Components provided can be rigged within the tolerances specified for the aircraft. Simulated inputs to the AFCS cockpit controls and indicators are provided to the interface of the control system. The rotary

DVC 01-57

wing system has foreshortened blades which are pressurized to allow the demonstration of BIM (R) servicing. One main and one tail blade are sectionized to show construction.

d. Hydraulic System. This consists of the first and second stage hydraulic servo system, AFCS servo system, and the rotor brake system.

Physical Information:

Trainer device: 216" x 588" x 264"
Hydraulic cart: 77" x 44" x 44"
Electric power console: 40" x 29" x 70"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, single-phase, 60 cycle
220 vac, 3-phase, 60 cycle

Applicable Publications:

Commercial Handbook of Operating Instructions

Reference Publications:

None

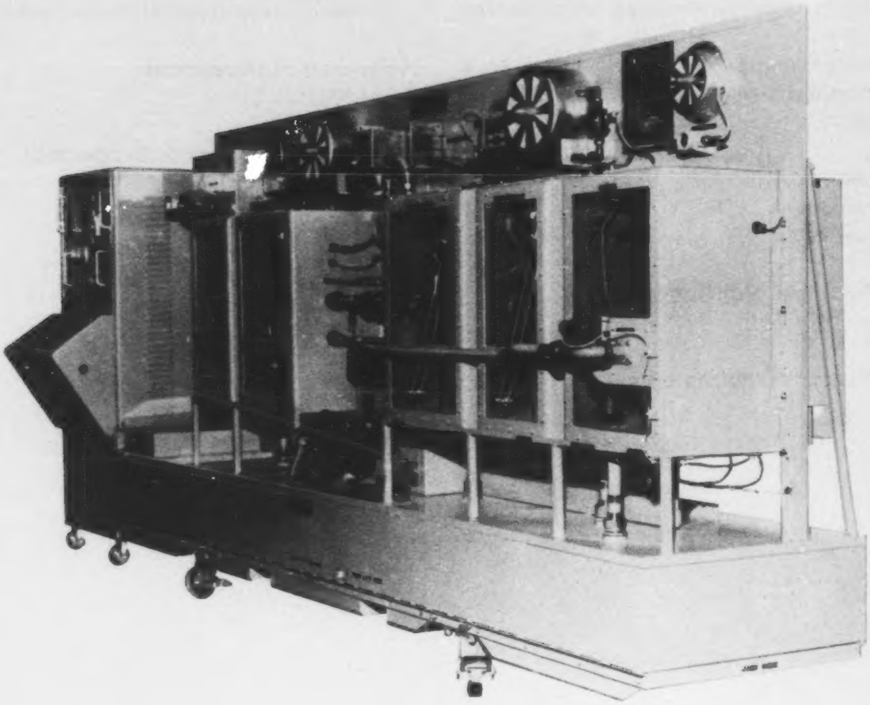
Training Requirements Supported:

SM 551-67X Tasks

1337	2158	2167	2168
2157	2159		

TRAINER, FUEL SYSTEM: CH-54A

DVC 01-58 **NSN 6910-00-930-7661**



DVC NO. 01-58

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer provides a realistic environment for an instructor to demonstrate operation, servicing, and adjustment of the Fuel System on CH-54A Helicopters. The specific training requirements supported are shown following the descriptive data.

DVC 01-58

Functional Description:

The Fuel System trainer depicts the complete Fuel System of the CH-54A Helicopter to include plumbing, valving, fittings, fuel cells, pumps, wiring, and switches. Components are mounted on a display panel and are interconnected by foreshortened wiring and plumbing installations.

This unit is an operating (wet) Fuel System allowing a 50-minute operating cycle with minimum filling and quick drain time available.

Physical Information:

Training console: 144'' x 30'' x 76''
Power console: 29'' x 29'' x 70''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, single-phase, 60 cycle
220 vac, 3-phase, 60 cycle

Applicable Publications:

Commercial Handbook of Operating Instructions

Reference Publications:

TM 55-1520-217 Series

Training Requirements Supported:

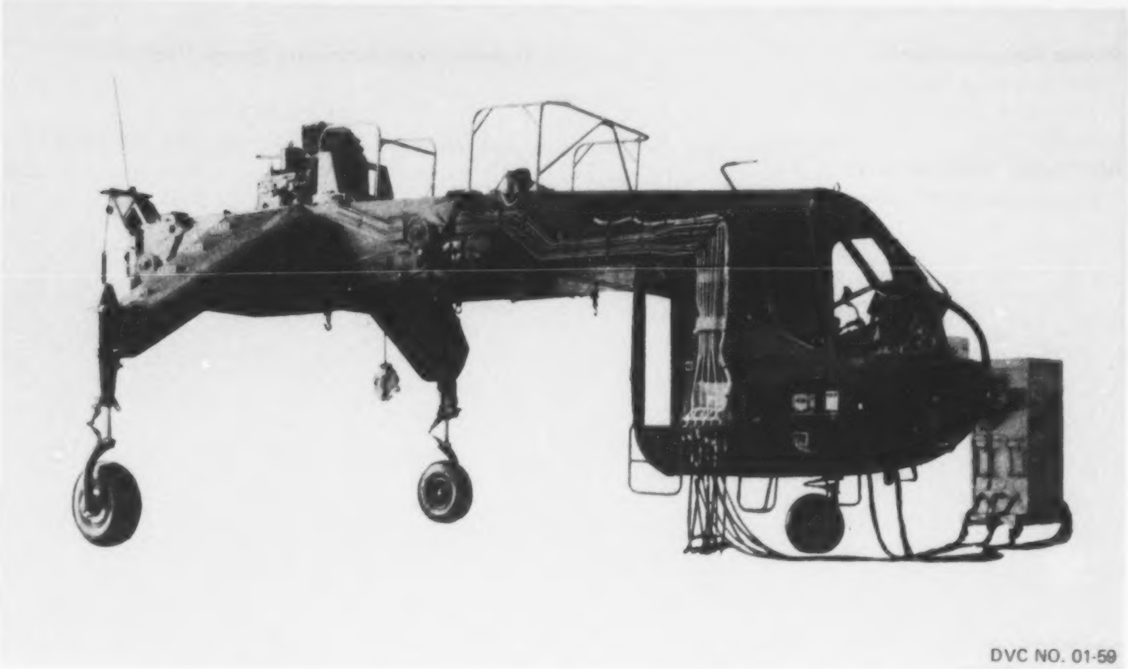
SM 551-67X Tasks

1337	2169	2173	2174
2033	2171		

TRAINER, ELECTRICAL AND HYDRAULIC SYSTEMS: CH-54A

DVC 01-59

NSN 6910-00-930-7662



DVC NO. 01-59

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer provides a realistic environment for an instructor to demonstrate installation, removal, operation, servicing, and adjustment of the Electrical and Hydraulic Systems and components of the CH-54A Helicopter. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer depicts the complete Electrical and Hydraulic Systems of the CH-54A Helicopter. Components are mounted externally on the fuselage of the operational aircraft in their properly related positions, where practical, and are interconnected by foreshortened wiring and plumbing installations. The trainer utilizes operational aircraft components with the exception of the APP, generators, nonoperable instruments, and avionic equipment.

Physical Information:
540'' x 168'' x 192''

Equipment Required, Not Supplied:
None

DVC 01-59

Special Installation Requirements:
None

Power Requirements:
110 vac, single-phase, 60 cycle
220 vac, 3-phase, 60 cycle

Applicable Publications:
Commercial Handbook of Operating Instructions

Reference Publications:
TM 55-1520-217 Series

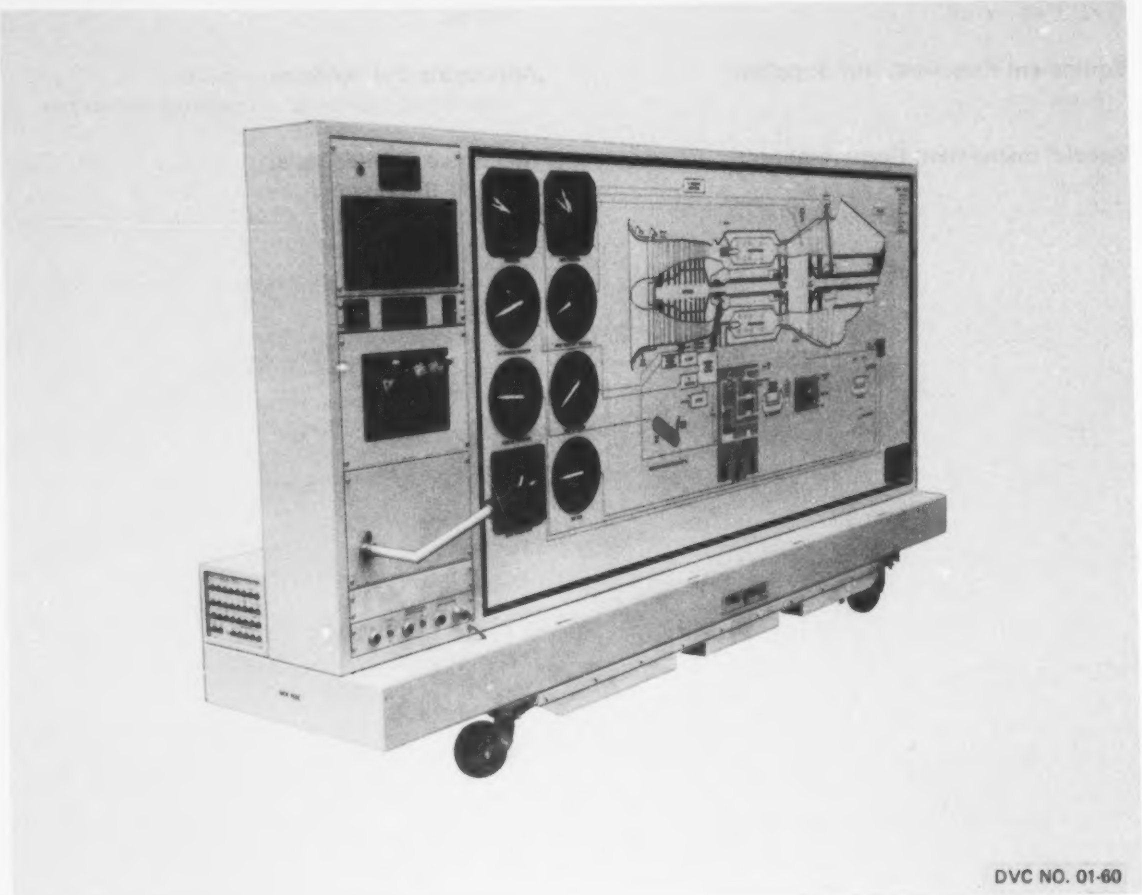
Training Requirements Supported:

SM 551-67X Tasks

1337
2031
2032
2033
2034
2035
2036
2037
2038
2109
2110
2357

TRAINER, ENGINE SYSTEM: CH-54A

DVC 01-60 **NSN 6910-00-930-7663**



DVC NO. 01-60

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service or Agency:

AVSCOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is for classroom use to provide a realistic environment for an instructor to familiarize aviators and crewmen with the operation and maintenance of the JFTD-4A/JFTD-12A engines on the CH-54A Helicopter.

Functional Description:

The trainer consists of a display board upon which is mounted the engine quadrant assembly in conjunction with an illuminated schematic of the JFTD-12A, -4A engine to depict the sequence of operation. Engine instruments are approximately three times actual size and are furnished with manually operable indicators where applicable.

DVC 01-60

Physical Information:
72"x 14" x 30"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

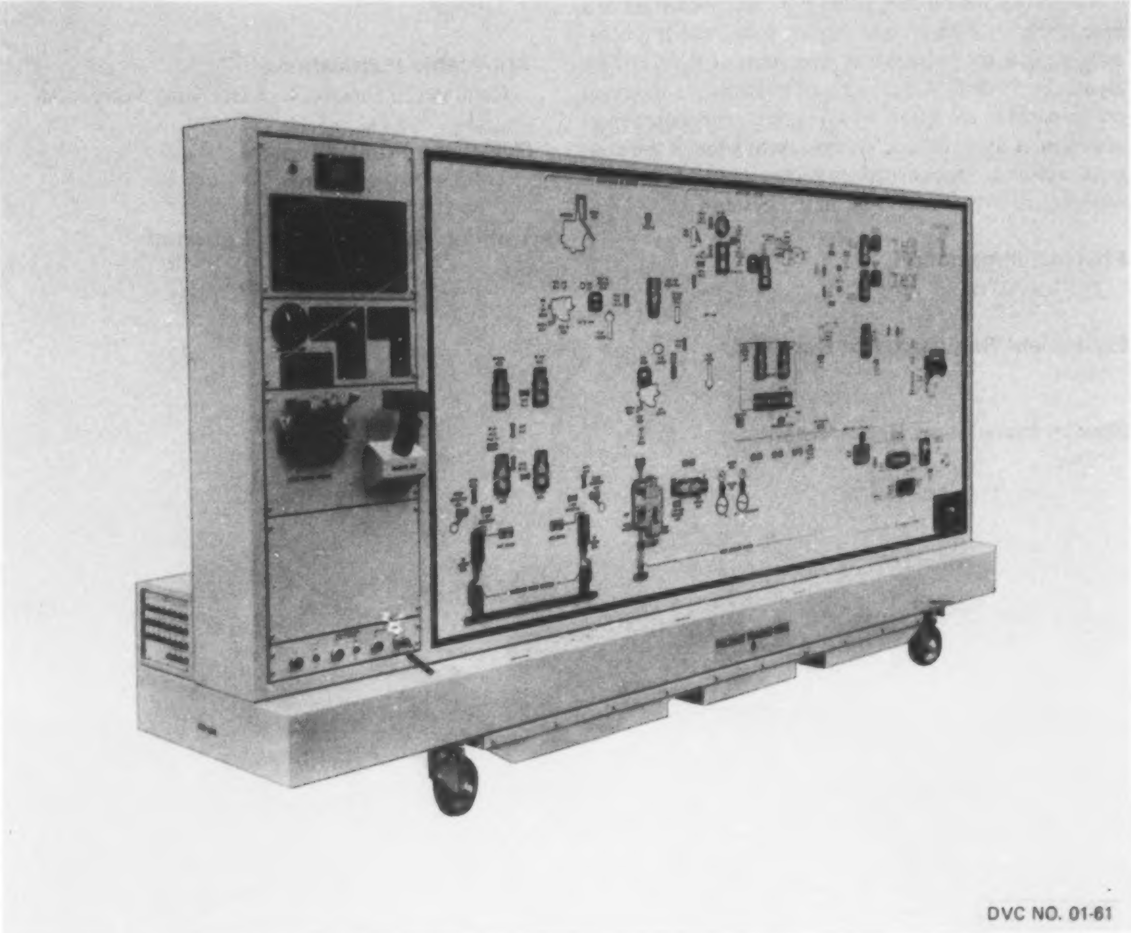
Power Requirements:
110 vac

Applicable Publications:
Commercial Handbook of Operating Instructions

Reference Publications:
TM 55-1520-217 Series

TRAINER, HYDRAULIC SYSTEM: CH-54A

DVC 01-61 **NSN 6910-00-930-7664**



DVC NO. 01-61

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use to provide a realistic environment for an instructor to familiarize aviators, crewmen, and maintenance personnel with the operation and maintenance of the CH-54A Hydraulic System. The specific training requirements supported are shown following the descriptive data.

DVC 01-61

Functional Description:

The trainer is a mobile, panel-type unit consisting of a base assembly with upright display panel which graphically depicts the sequence of operation of the CH-54A Hydraulic System. Actual aircraft controls are mounted on the panel to the left of a backlighted schematic representation of the hydraulic system. Activation of the controls creates an illuminated path depicting the resultant sequence of events occurring in the system.

Physical Information:

144" x 30" x 73"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

Commercial Handbook of Operating Instructions

Reference Publications:

TM 55-1520-217 Series

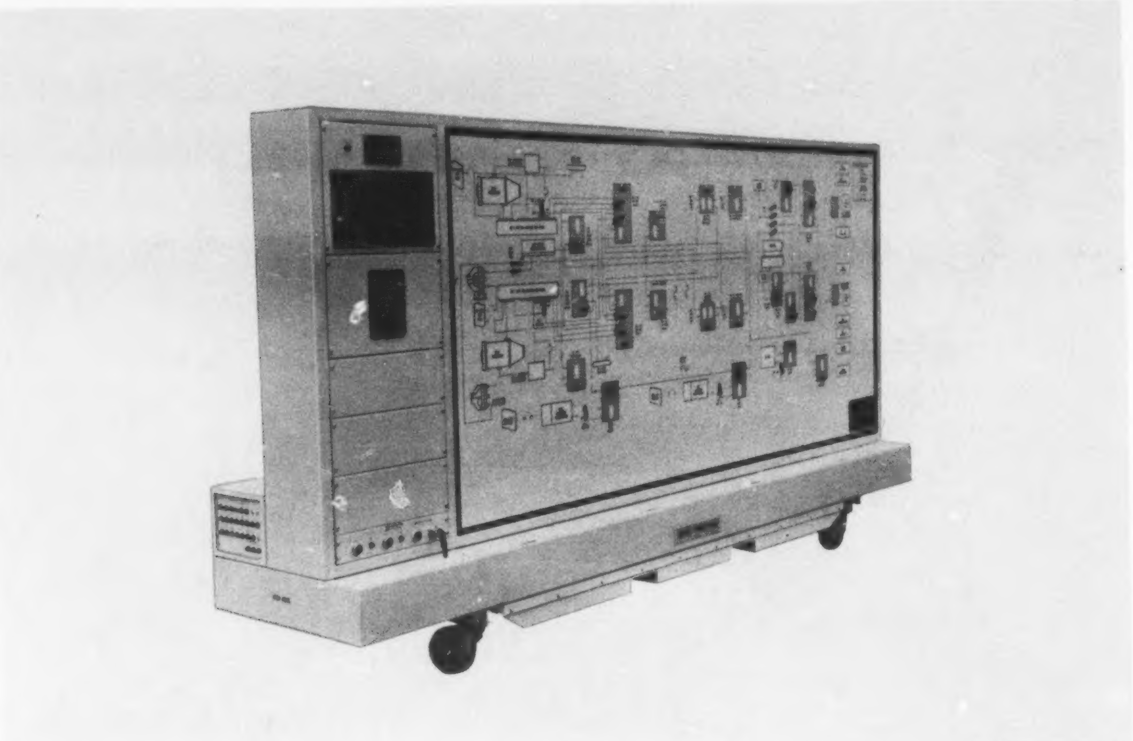
Training Requirements Supported:

SM 551-67X Tasks

2005 2031

TRAINER, ELECTRICAL SYSTEM: CH-54A

DVC 01-62 **NSN 6910-00-930-7665**



DVC NO. 01-62

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
Trainer is for classroom use to provide a realistic environment for an instructor to familiarize aviators, crewmen, and maintenance personnel in the operation and maintenance of the CH-54A Electrical System.

Functional Description:
The trainer is a mobile, panel-type unit consisting of a base assembly with an upright display panel which graphically depicts the sequence of operation of the CH-54A Electrical System. Actual aircraft controls are mounted on the panel to the left of a backlighted schematic representation of the system. Activation of the controls creates an illuminated path depicting the sequence of events of the electrical system.

Physical Information:
144" x 30" x 72"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

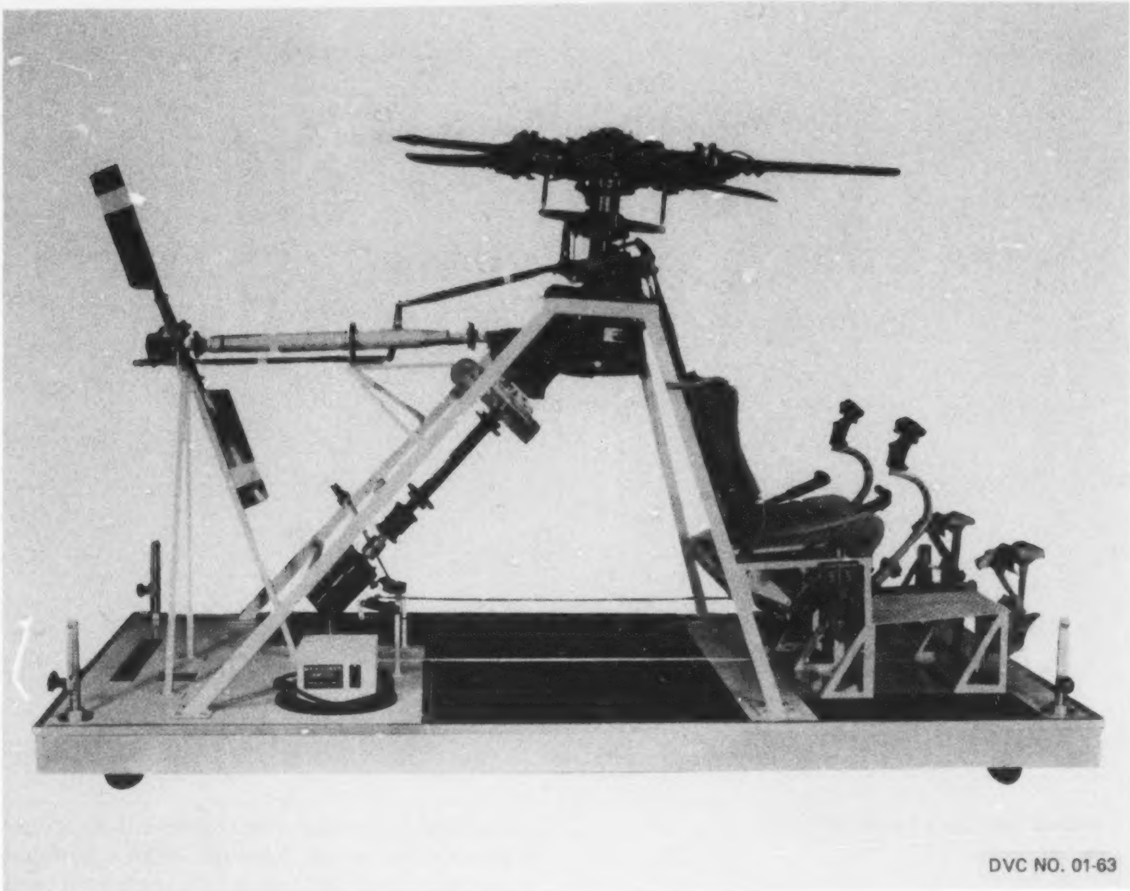
Power Requirements:
110 vac

Applicable Publications:
Commercial Handbook of Operating Instructions

Reference Publications:
TM 55-1520-217 Series

OH-6A COMPOSITE TRAINER

DVC 01-63 **NSN 6930-01-063-7528**



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is used to provide a system demonstrator and a maintenance and rigging trainer for the flight controls, engine controls, power transmission, and main rotor systems of the operational OH-6A Helicopter. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer consists of elements of the Flight Control System, Engine Control System, Drive System, and main rotor, mounted on a frame in the same relative position as on the aircraft. All elements of these systems are included except the engine, engine accessories, and those portions of the engine controls attaching directly to the

engine. The engine is replaced by an electric motor designed to drive the main rotor at approximately 4 rpm.

The main rotor blades, the tail rotor drive shaft, and the control rod assemblies aft of the cockpit and in the tail rotor control system, are shortened to reduce trainer size. The main transmission assembly, tail rotor transmission, main rotor hub assembly, and tail rotor assembly are sectioned to show internal details. Plastic covers are fitted over all moving parts to reduce possibility of injury. The aviator's seat is included to permit demonstration of the controls.

Elements of the airframe are replaced by a steel tubular structure, containing all the necessary support points, mounted on heavy-duty locking casters. Leveling jacks are located at the corners of the main frame. A canvas cover is provided for dust protection when the trainer is not in use.

Physical Information:
144" x 60" x 84"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
220 vac, 1,000 watts

Applicable Publications:
Commercial Handbook of Operating Instructions:

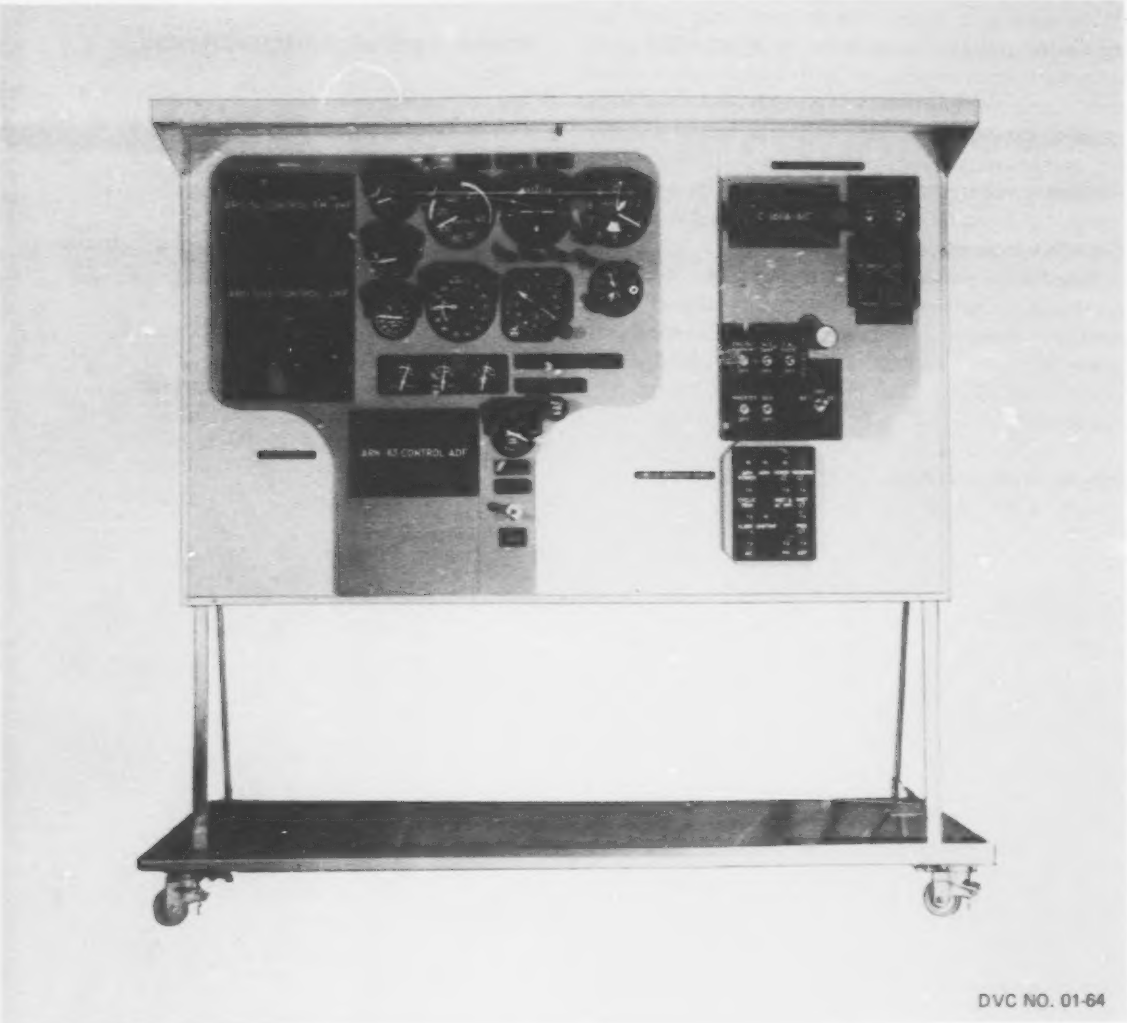
Reference Publications:
TM 55-1520-214 Series

Training Requirements Supported:

SM 551-67V Tasks			
1009	2271	3149	3152

OH-6A INSTRUMENT SYSTEMS TRAINER

DVC 01-64 **NSN 6930-01-063-7524**



DVC NO. 01-64

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

DVC 01-64

Purpose of Trainer:

The trainer is used to provide a realistic environment for demonstrating to maintenance and operating personnel the instrument settings which can be expected under various aircraft operating conditions. It can also be used as a familiarization device to show cockpit layout of the various instrument and electrical system components. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The OH-6A Instrument System's display board consists of three times actual size mockups of the helicopter's instrument panel, electrical control console, and circuit breaker panel. Electronic controls are identified with blank panels.

Instruments have movable pointers and knobs which can be set by the instructor. Switches and warning lights are fixed in the OFF position. No lighting is incorporated in the instruments or warning lights.

The mockups are mounted on a display panel which can be raised to a height of 106 inches for classroom use. The panel, including lighting, is mounted on a steel tubular frame equipped with locking casters for mobility. A canvas cover is provided for dust protection when the device is not in use.

Physical Information:

108" x 36" x 72"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

Commercial Handbook of Operating Instructions

Reference Publications:

TM 55-1520-214 Series

Training Requirements Supported:

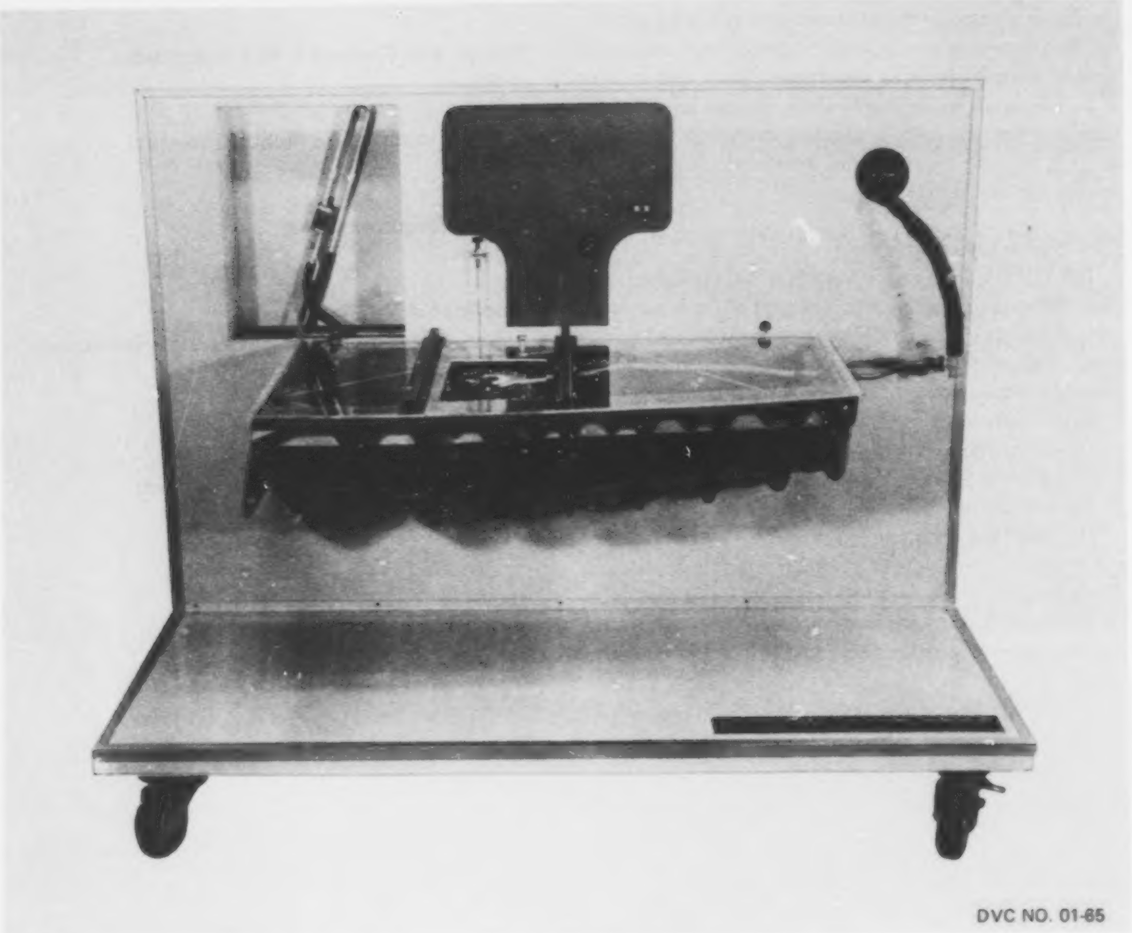
SM 551-67V Tasks

1009	2260	2261

OH-6A FUEL SYSTEM TRAINER

DVC 01-65

NSN 6930-01-063-7523



DVC NO. 01-65

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to support maintenance training on the OH-6A Helicopter. The trainer provides a demonstration panel of the actual installation of the fuel cell and its associated components on the operational aircraft. The specific training requirements supported are shown following the descriptive data.

DVC 01-65

Functional Description:

The trainer consists of the left-hand tank installation for the OH-6A Helicopter with its supporting aircraft structure mounted on a back panel and frame. The back panel also contains a silhouette of the instrument panel with an operating fuel gage and fuel-low warning light, a mockup fuel pump, and the vent system.

The fuel tank is sectioned. The floor of the aircraft has been replaced with a clear Plexiglas cover to permit the tank installation and contents to be seen. Connections to the right-hand fuel tank are shown going through the panel.

The aircraft structure supporting the tank is included, but the skin has been removed to permit installation of the fiberglass to be seen. A canvas cover is provided for dust protection when the trainer is not in use.

Because of the Plexiglas floor and the cutaway fuel cell, it is possible to show features of the tank installation, such as the lacing procedure, which cannot be seen on the aircraft. The device is intended to be used with an instructor, but can also be used as a static display. The fuel gage and low-level warning lights are operable; however, the wiring for these units is nonaircraft.

Physical Information:
72'' x 36'' x 60''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
Commercial Handbook of Operating Instructions

Reference Publications:
TM 55-1520-214 Series

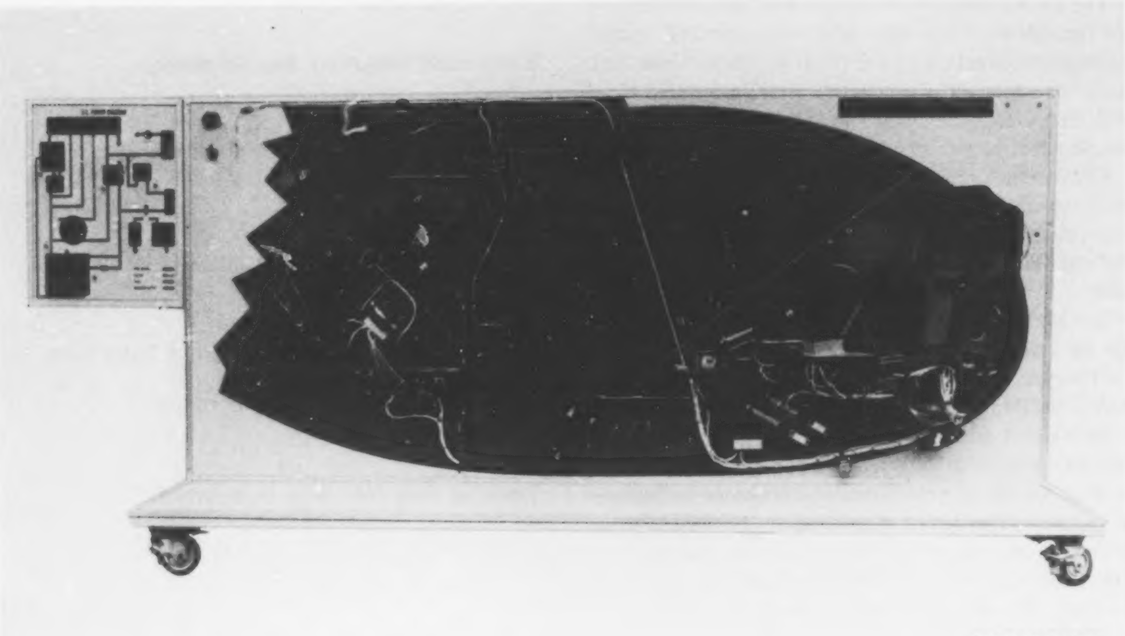
Training Requirements Supported:

SM 551-67U Tasks

2214 3235

OH-6A ELECTRICAL SYSTEM TRAINER

DVC 01-66 **NSN 6930-01-064-2776**



DVC NO. 01-66

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is for classroom use to support maintenance training on the OH-6A Helicopter. It provides a realistic environment for presenting the electrical components of the production aircraft. The use of operational equipment and system simulation offers a comprehensive means for instructing installation, removal, servicing, adjustment, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of an aircraft silhouette, displayed on a back panel, upon which are mounted all components of the electrical system for the OH-6A Helicopter, except for the radio and electronics equipment. Elements of the aircraft structure, which are required to show equipment location or electrical grounds, are shown as painted silhouettes. The battery, power plant, and main transmission are shown as silhouette overlays. The instrument panel is mounted on a bracket which allows it to swing from a position approximately parallel to the back board to about 90°. For safety reasons, the battery, ignition system, and starting generator are not operational. Wiring consists of aircraft harnesses which have been lengthened or shortened to suit the layout of the panel.

An instructor's console is mounted behind the panel at the right-hand end. The panel contains controls for the motors driving the tachometer generators and switches for introducing various malfunctions.

DVC 01-66

A backlighted animated schematic of the dc power system is mounted on the left-hand end of the trainer showing the dc power system up to the bus. The lines are color coded. Lighting is individually controlled by toggle switches adjacent to the line of components. Switches and relay contacts are animated. Internal wiring diagrams of all components, except the voltage regulator, are shown. A canvas cover is provided for dust protection when the trainer is not in use.

Operation of all components can be demonstrated in engine OFF and engine ON modes. Continuity checks can be made of all wiring. Power checks can be made, but voltage readings will differ from those in the aircraft because a 24-volt dc power supply is used. To a limited extent, the trainer may be used as a self-teaching training aid. For example, with all of the instructor malfunction switches in the normal position, a student could operate the trainer by himself to observe operation of the equipment. Because the instructor panel and the animated panel are noncomputerized, an instructor is required to demonstrate the dc power system, engine OFF modes, and malfunctions.

Physical Information:
144'' x 36'' x 72''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
Commercial Handbook of Operating Instructions

Reference Publications:
TM 55-1520-214 Series

Training Requirements Supported:

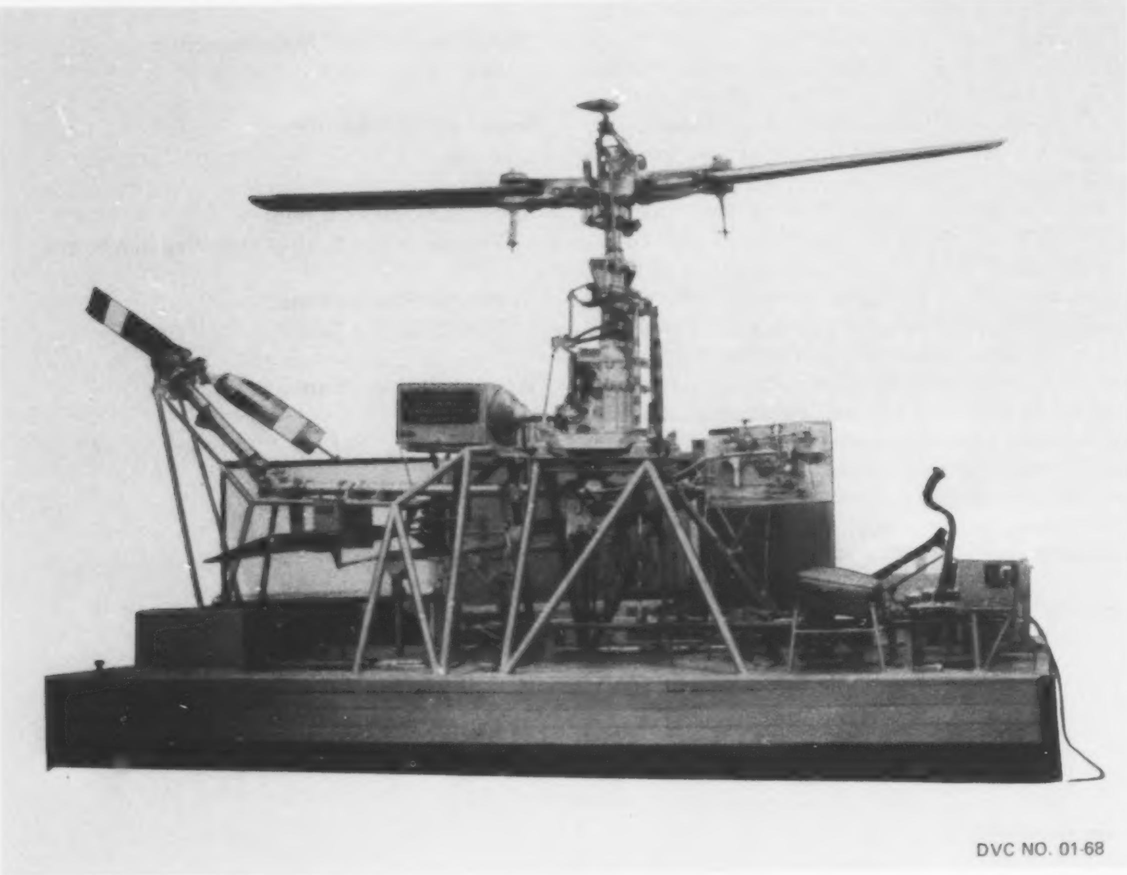
SM 551-67V Tasks

2260 2261 2263

UH-1A FLIGHT CONTROL AND TRANSMISSION SYSTEM TRAINER

DVC 01-68
2A19

NSN 6930-01-063-7526


DVC NO. 01-68

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is for classroom use in training flight and maintenance personnel on the UH-1A Helicopter. It is used as a system demonstrator to familiarize aviators, crewmen, and maintenance personnel in the operation and rigging of the flight controls and mechanical drive systems of the UH-1A Helicopter.

Functional Description:

The trainer consists of the flight control and hydraulic system, and the mechanical drive components of the operational helicopter. All components are arranged so that each individual control motion and drive rotation can be observed. All items requiring adjustment or rigging are included, as well as duplication of the proper control travel and alignment. Provisions are made to operate the hydraulic boost and stick centering systems of the controls, and to drive the transmission system at a low rpm. Large assemblies are cut away to reveal internal operation and construction. Power units to operate the systems are provided. A one-half horsepower gear motor drives the main transmission for rotation of the rotor and the transmission system. A variable displacement hydraulic pump, electrically driven, is mounted at the aft end of the trainer and connected by lines to the hydraulic system through the rear of the hydraulic panel.

A combination data case and control console is located at the forward end of the trainer and contains all instructor-controlled switches and circuit breakers for actuation of all trainer power systems.

Physical Information:

209" x 57" x 126"; 3,560 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

NAVEXOS P-2036, Operation and Maintenance Guide with Parts List for UH-1A Helicopter Systems Trainer

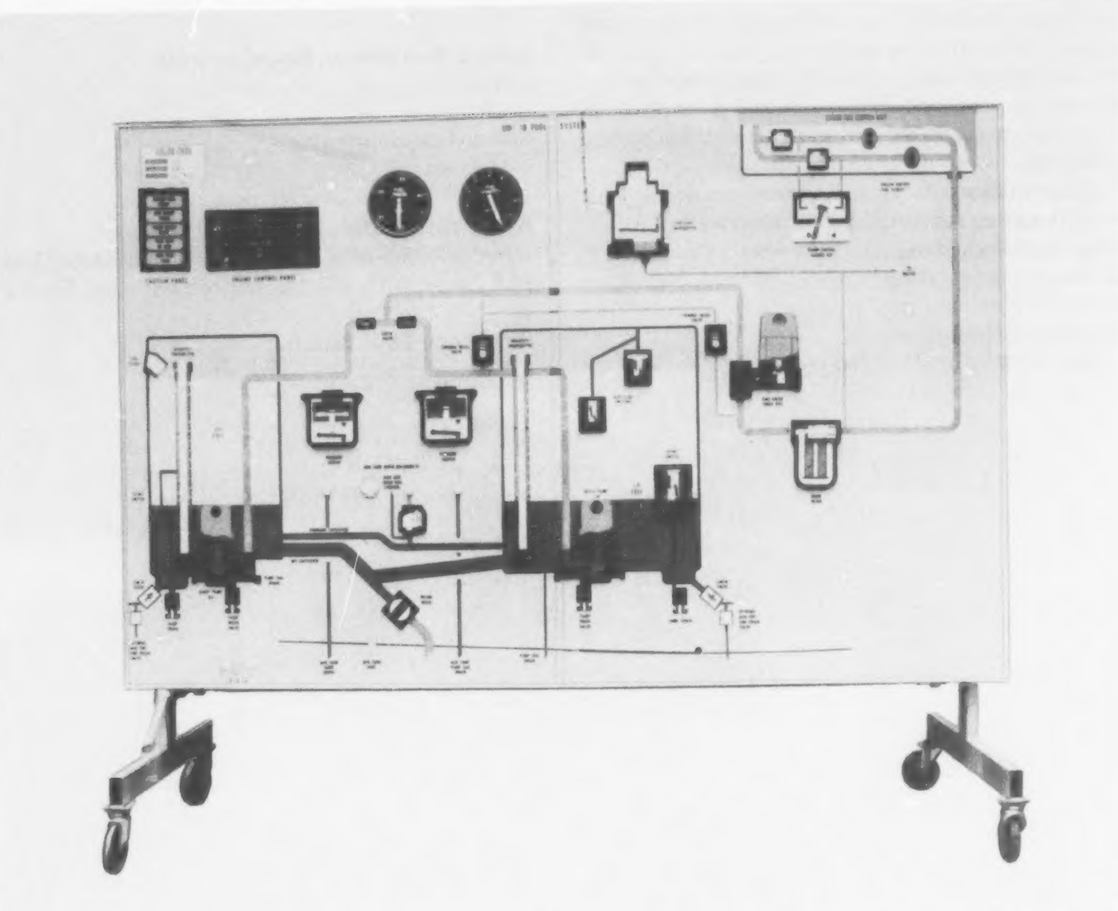
Reference Publications:

None

UH-1B FUEL SYSTEM TRAINER

DVC 01-69

NSN 6930-01-063-7525



DVC NO. 01-69

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use in the support of maintenance training on the UH-1B Helicopter. It provides a realistic environment for presenting the Fuel System components of the UH-1B Helicopter. The specific training requirements supported are shown following the descriptive data.

DVC 01-69

Functional Description:

The trainer consists of operational components mounted on a board. It includes pumps, fuel quantity gage and system, and fuel pressure transmitter and gage designed to provide complete understanding of the system and its components.

The units and components of the system have been grouped to show their physical and functional relationship and, where possible, their approximate orientation. Color-coded paths are utilized to show sequence of operation of the Fuel System.

Physical Information:

96'' x 34'' x 72''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

Commercial Handbook of Operating and Maintenance Instructions

Reference Publications:

TM 55-1520-210 Series

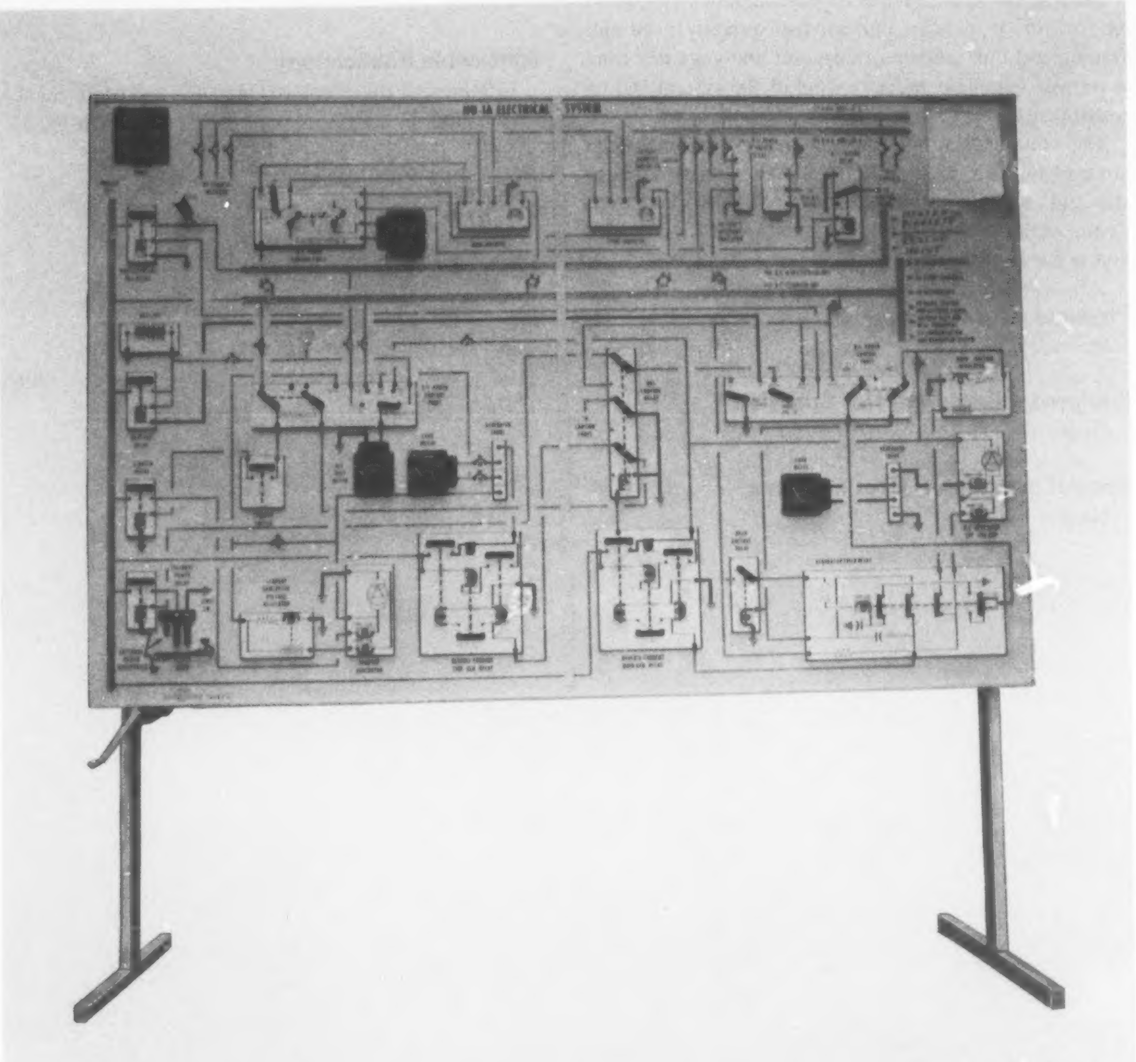
Training Requirements Supported:

SM 551-67N Tasks

1108 1115 1116 3065
1110

UH-1B ELECTRICAL SYSTEM PANEL TRAINER

DVC 01-70 **NSN 6930-01-063-7534**



DVC NO. 01-70

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

DVC 01-70

Purpose of Trainer:

The trainer is used for classroom training to demonstrate the functions of the electrical system of the UH-1B Helicopter. It provides the means for training in the support maintenance, inspection, troubleshooting, and safety precaution courses of instruction of the UH-1B Electrical System. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a mobile, panel-type unit consisting of a base assembly with an upright display panel which graphically depicts the sequence of operation of the UH-1B Electrical System. Operational components have been schematically mounted and grouped to show their physical functional relationship. Where possible, approximate orientation is also shown. Color-coded paths are utilized to show sequence of operation of the electrical system.

Physical Information:

96" x 34" x 72"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

Commercial Handbook of Operating and Maintenance Instructions

Reference Publications:

TM 55-1520-210 Series

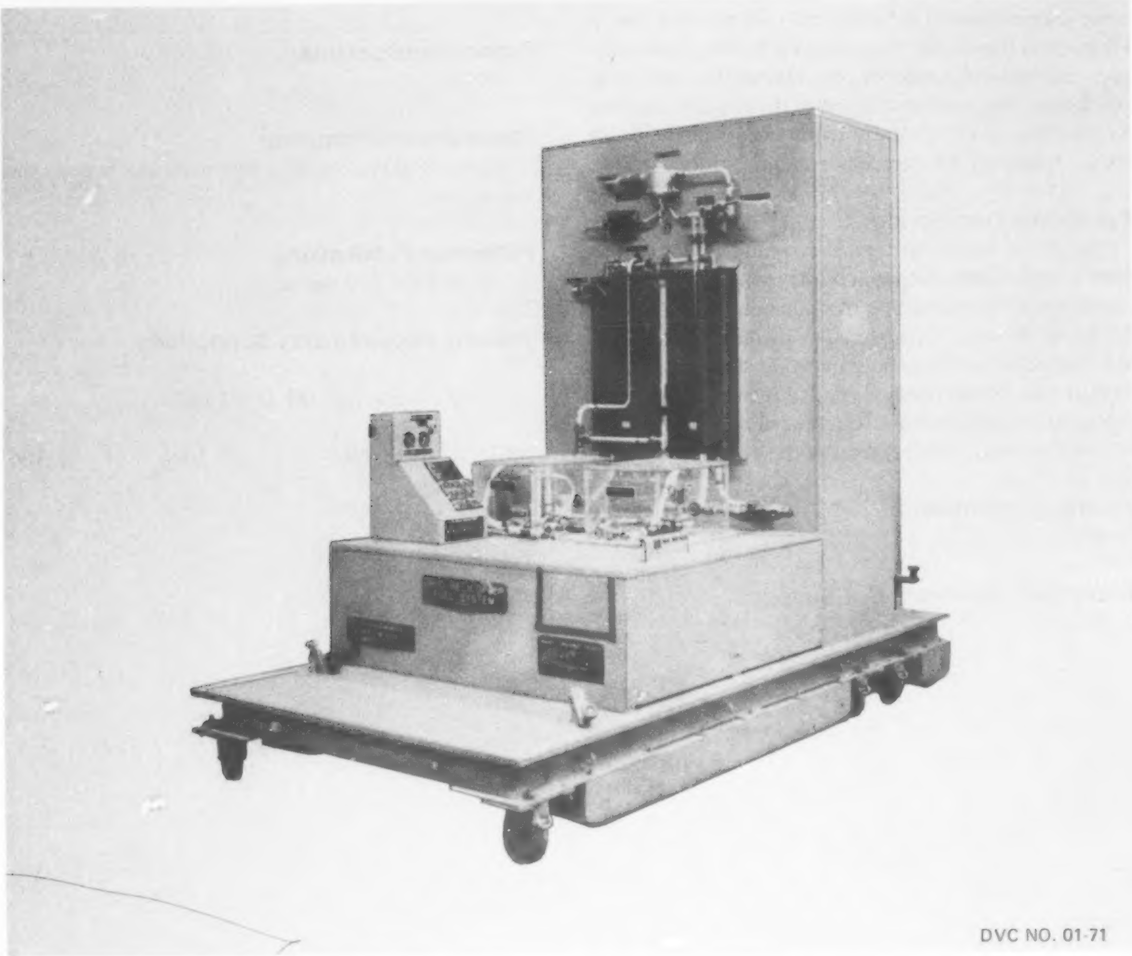
Training Requirements Supported:

SM 551-68F Tasks

1003	1061	1062	1063
1004			

UH-1D FUEL SYSTEM TRAINER

DVC 01-71 **NSN 6930-01-063-7516**



DVC NO. 01-71

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

DVC 01-71

Purpose of Trainer:
The trainer is for classroom use in the support of maintenance training on UH-1D Helicopter. It provides a realistic environment for presenting the fuel system components of the production aircraft. The use of operational equipment and system simulation offers a comprehensive means of instructing installation, servicing, adjustment, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer consists of a welded steel and plywood platform upon which are mounted pumps, fuel quantity gage and system, and fuel pressure transmitter and gage, with aircraft structural parts cut away to reveal internal workings of the UH-1D Helicopter Fuel System. Manipulation of actual aircraft controls forces a colored liquid through the operational components of the system to simulate flow of JP-4 fuel. The fuel flow is visible through plastic windows.

Physical Information:
48'' x 96'' x 72''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
Commercial Handbook of Operating Instructions

Reference Publications:
TM 55-1520-210 Series

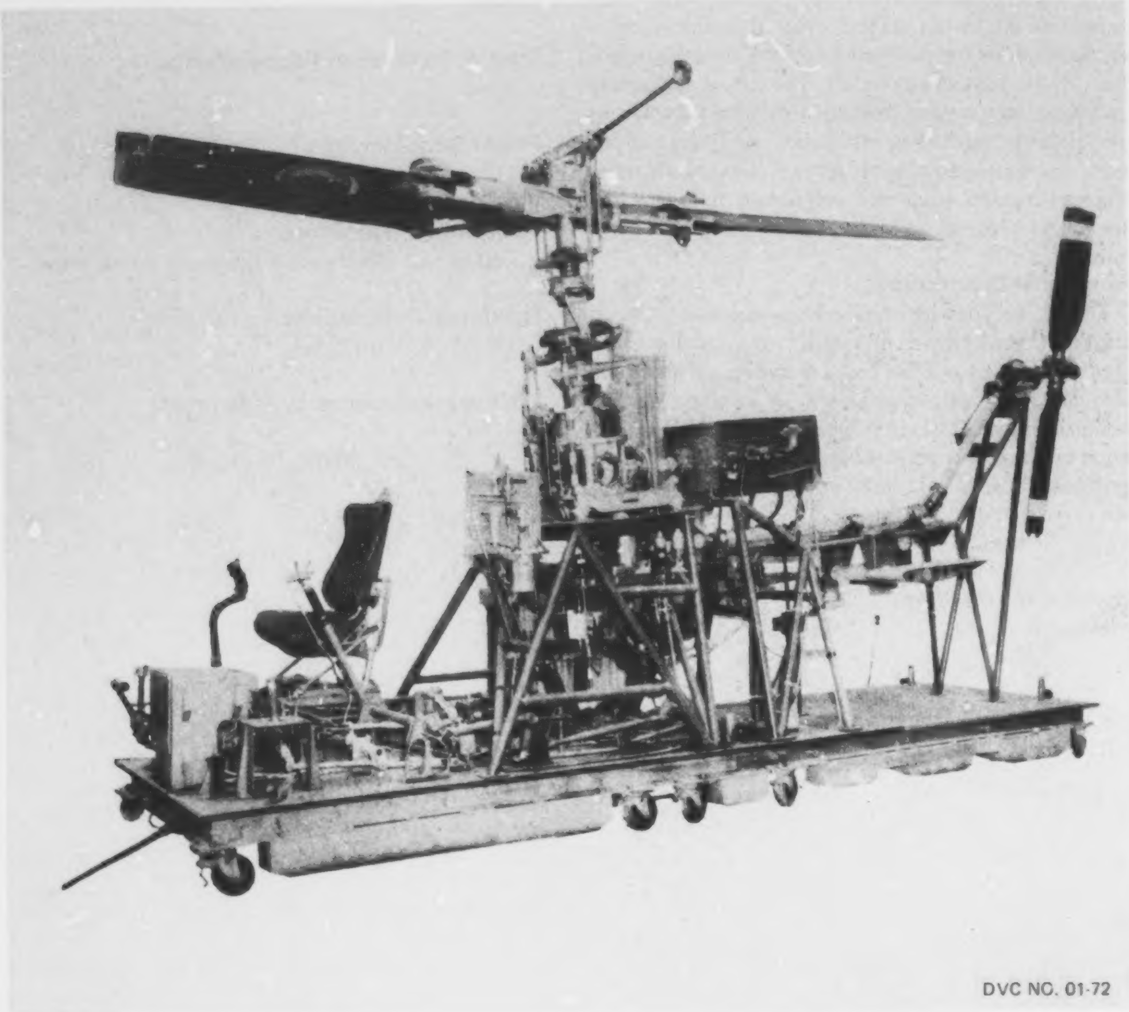
Training Requirements Supported:

SM 551-67N Tasks

1108	1115	1116	3065
1110			

UH-1D MAINTENANCE TRAINER

DVC 01-72 NSN 6930-01-064-4418



DVC NO. 01-72

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

best copy available

DVC 01-72

Purpose of Trainer:

The trainer is for classroom use in the support of maintenance and rigging training on the UH-1D Helicopter. It is used as a systems demonstrator and a maintenance and rigging trainer for the flight controls, engine controls, power transmission, and main rotor systems of the operational helicopter. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of the flight control and hydraulic system and the mechanical drive components of the operational helicopter. All components are arranged so that each individual control motion and drive rotation can be observed. All items requiring adjustment or rigging are included, as well as duplication of the proper control travel and alignment. Provisions are made to operate the hydraulic boost and stick centering systems of the controls and to drive the transmission system at a low rpm. Large assemblies are cut away to reveal internal operation and construction. Power units to operate the systems are provided. A one-half horsepower gear motor drives the main transmission for rotation of the rotor and the transmission system. A variable displacement hydraulic pump, electrically driven, is mounted at the aft end of the trainer and connected by lines to the hydraulic system through the rear of the hydraulic panel.

A combination data base and control console is located at the forward end of the trainer and contains all instructor-controlled switches and circuit breakers for actuation of all trainer power systems.

Physical Information:

209'' x 57'' x 126''; 3,560 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 v ac

Applicable Publications:

Commercial Handbook of Operating Instructions

Reference Publications:

TM 55-1520-210 Series

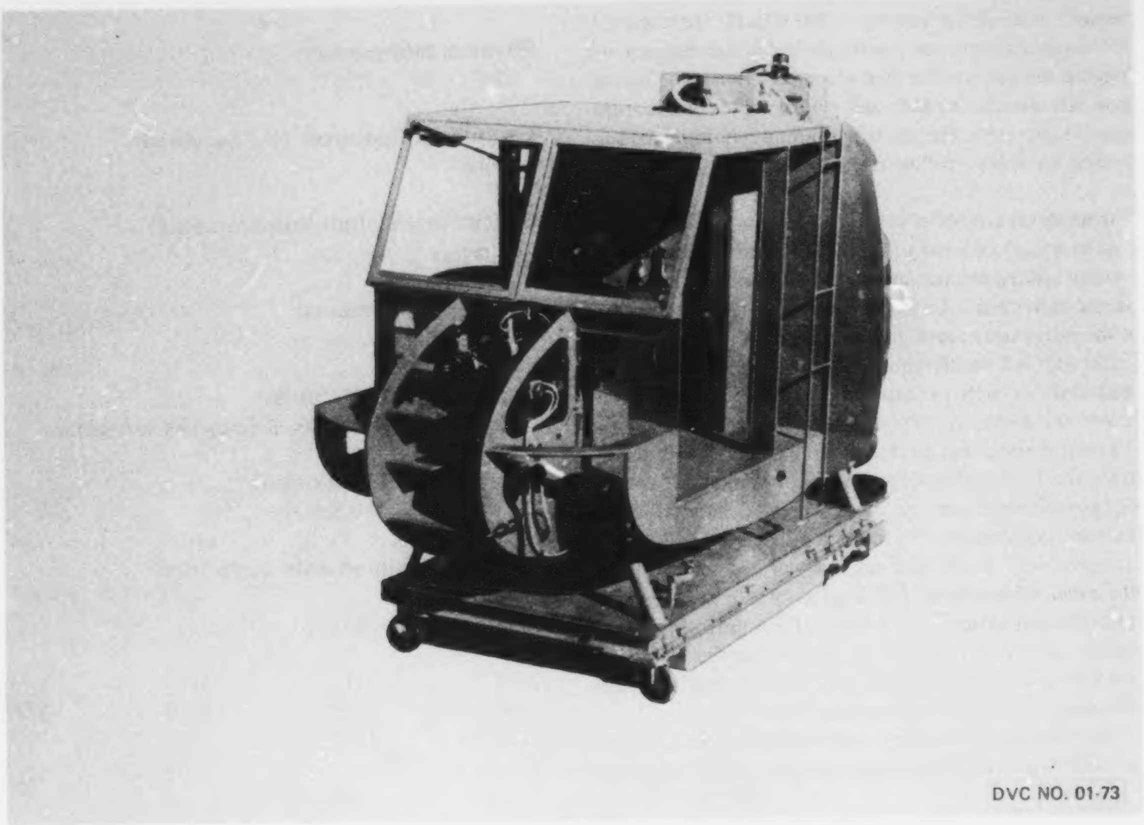
Training Requirements Supported:

SM 551-67N Tasks

2159	3111	3118	3120
2160	3116	3119	3142
2161	3117		

UH-1H ELECTRICAL SYSTEM TRAINER

DVC 01-73 **NSN 6930-01-063-7515**


DVC NO. 01-73

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is used to demonstrate the functions of the Electrical System installed on the UH-1H Helicopter, and for classroom training in the support of maintenance inspection, electrical system troubleshooting, and safety precaution courses of instruction. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The base of the trainer is constructed of welded steel I-beams and covered with heavy plywood which is reinforced by an overlay of metal decking. Removable, swivel-type, rubber-tired casters are installed on the trainer base. Screw jacks are attached to the base frame for the purpose of securing the trainer in a static position.

A simulated cockpit of the UH-1H Helicopter is attached to the trainer base. The cockpit is equipped with a console, instrument and electrical panels, cyclic and collective sticks, and other helicopter electrical components. With the exception of the generator drive unit, all electrical components are standard helicopter parts. Some of the components have been slightly modified to allow for induced malfunction, but normal operation of these units is unimpaired. All components-wiring, switches, circuit breakers, and associated fixtures-are located in positions which approximate the production helicopter. Electrical components of the fuel distribution system are excluded from this trainer. Flight and engine instruments which are not directly associated with the Electrical System training are simulated by photographs on the instrument panel.

The Instructor's Control Panel contains the switches and circuit breakers by which malfunctions are introduced into the Electrical System. This panel is equipped with a 20-foot umbilical cord which is connected to the aft end of the trainer. This places the instructor at a remote position while malfunctions are induced into the Electrical System.

Physical Information:
144'' x 84'' x 96''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
220 vac

Applicable Publications:
Commercial Handbook of Operating Procedures and Maintenance Instructions

Reference Publications:
TM 55-1520-210 Series

Training Requirements Supported:

SM 551-68F Tasks

1003	1061	1062	1063
1004			

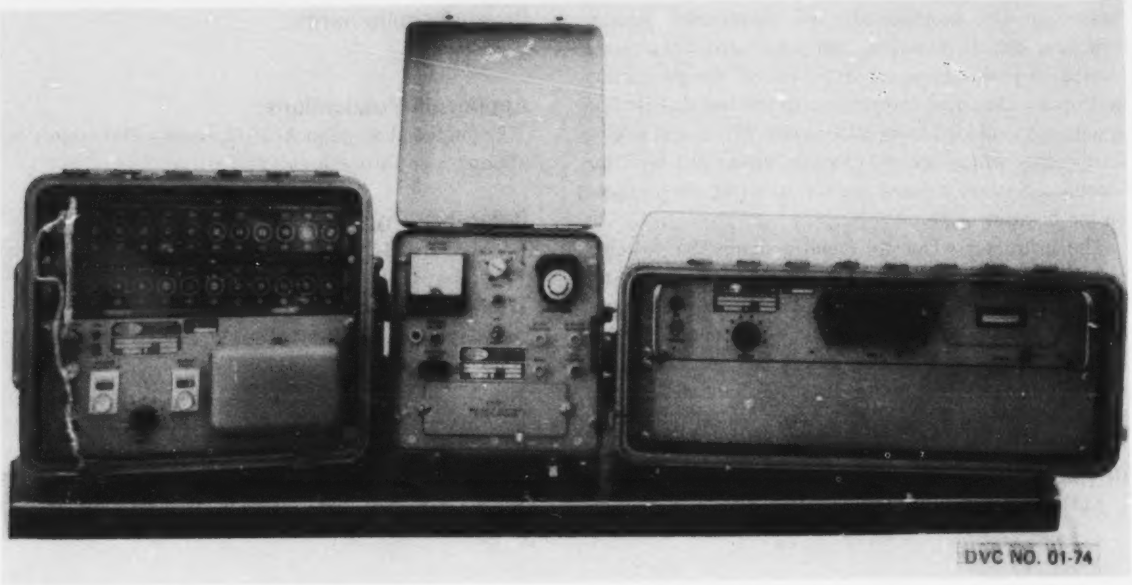
REMOTE SCORING GUNNERY TARGET

DVC 01-74
3H18

NSN 6920-01-063-7521

DVC 01-74A
3H18B

NSN 6920-01-063-7522



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For use on the firing range to provide a training system that combines realistic appearing ground targets with an instrumented scoring system for air-to-ground weapons firing. The trainer is intended for use in training aerial-gunners, fire direction personnel, and forward observers. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer achieves a realistic tactical atmosphere by deploying life-size expendable targets on a firing range. Immediate evaluation readout is provided by an acoustical scoring system, which indicates totals and displays the "hit" score each time a round passes through a target "hit" zone. The targets and associated scoring equipment are portable and may be easily redeployed to prevent a "canned" situation.

DVC 01-74

The instrument components of the acoustical scoring system sense the shock wave generated by a round as it passes a target, measure the amplitude of the shock wave, and utilize the projectile velocity and caliber to compute the miss distance.

The scoring system hardware consists of a transducer located at the target, which senses the shock wave amplitude of a passing projectile and sends it through a cable to a signal conditioning unit.

The signal conditioning circuits compute the miss distance and, if a hit was scored, convert the hit to a pulse code composed of target identification and a data pulse.

During the coding operation, a signal is generated which turns on the telemetry transmitter. The pulse code modulation (PCM) is then transmitted to the receiver-display center. In the receiver display circuits, the PCM is decoded and the data displayed on electronic counters. Thus, a direct totalized readout is obtained of the number of projectiles which passed through the hit zone hemisphere representing the target.

The signal conditioning and transmission unit is supplied with a self-contained rechargeable battery which furnishes operating power, a portable broadband antenna, a transducer, and a 300-foot transducer cable. The long transducer cable allows the signal conditioning and transmission unit to be installed well away from the impact zone surrounding the target.

The data reception processing and display unit operates from 110 vac. A single broadband antenna supplies signal input for eight data reception processing and display units through an antenna (and power) distribution unit.

Physical Information:

Data reception processing and display set: 24" x 10" x 18"

Signal conditioning and transmission set: 14" x 14" x 8"

Test calibrator: 10" x 12" x 6"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

Commercial Manual of Inspection, Installation, and Test Plan

Reference Publications:

None

Training Requirements Supported:

MOSC 15-1C, 15-1D, 15-1J, 15-1L, 15-1M, 100E, 100F, and 100G

ATM TC 1-136 Tasks

6007
6008
6009
6010
6011
6012
6013
6014
6015
6020
6024
6025
6026

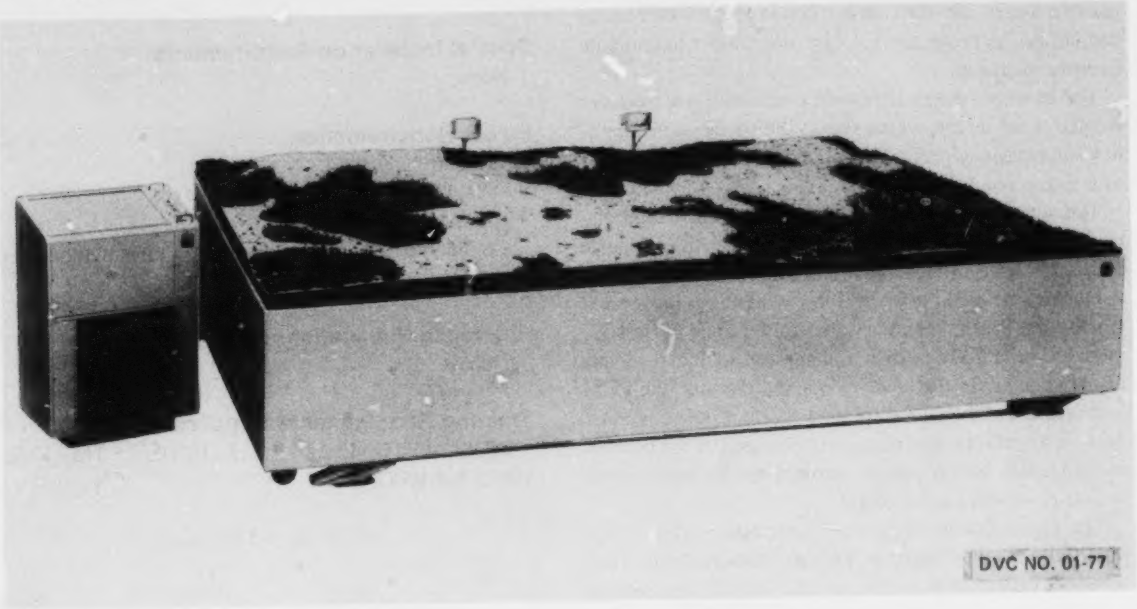
ATM TC 1-137 Tasks

6006
6014

AERIAL OBSERVERS BASIC PROCEDURES TRAINER

DVC 01-77
17E4

NSN 6910-01-063-7555



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The device is used for classroom training of Army aviation personnel to afford practice in basic aerial tactics in estimating the location of a target in terms of grid coordinates, communicating the target information to supporting field artillery, observing the effects of field artillery fire, correcting the information if necessary, and finally destroying the selected target. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a terrain model assembly and an instructor console assembly. The terrain model assembly contains a porous, three-dimensional scale (1:480) model of a section of the Fort Rucker military reservation. A remotely controlled mechanism (under the terrain model) positions a group of smoke puff dischargers at any desired position (within the limits of operation). Shellbursts are simulated by blowing the smoke through the porous surface of the model.

The instructor console contains controls for positioning and operating the smoke puff mechanism, and a translucent, 1:3600 scale, military grid map of the terrain. A projected crosshair on the grid map indicates the position of the smoke puff mechanism.

The trainee estimates the grid coordinates of a simulated target situated on the terrain model and communicates the target position data to the instructor at the instructor console. The instructor utilizes the controls on the instructor console to cause a simulated shellburst to appear on the terrain model at the coordinates specified by the student observer. The trainee observes the location of the shellburst relative to the target and transmits corrections (as needed) to the instructor, who produces a shellburst at the new coordinates. This procedure continues until a direct hit on the target is effected.

By use of his controls, the instructor can simulate a single shellburst, two simultaneous bursts, or a salvo of six shellbursts. Thus, the trainer can be used to demonstrate the required procedures as well as to test the trainee's proficiency.

The terrain model assembly is mounted on casters so that it can be moved out of the classroom when not in use. In addition, lifting jacks are provided at the base so that the front and/or rear of the terrain may be elevated as much as 12'', as needed for better viewing.

Physical Information:

Terrain model assembly is 180'' wide by 120'' deep. Its height slopes from 36'' at the front to 42'' at the rear. Indicators mounted on rear extend an additional 8''. Weight is approximately 1,600 lb.

Instructor's console is 30'' wide by 21'' deep by 46'' high. Weight is 185 lb.

Equipment Required, Not Supplied:

Models of simulated targets at a scale of 1:480 must be supplied by the user. As many as 70 targets can be accommodated on the terrain.

Special Installation Requirements:

The terrain model assembly requires approximately 252'' by 192'' (providing 36'' clearance on all four sides). The instructor console requires approximately 36'' by 60''.

Power Requirements:

110 vac

Applicable Publications:

NAVSO P-2926, Maintenance Handbook with Parts List for Device 17E4

Reference Publications:

None

Training Requirements Supported:

ARTEP 17-205 Tasks

1-17-3
1-17-4
1-17-5
1-17-6
1-17-7
3-10-2

ARTEP 17-385 Tasks

1-9-6
1-9-7
1-9-8
1-9-9
1-9-15
1-9-16
1-11-2
1-11-3
1-11-4
1-11-5
1-11-6
1-11-7
2-4-6
2-4-7
2-4-8
2-4-9
2-4-16
3-6-2
3-6-3
3-6-4
3-6-5
3-6-6
3-6-7

MOSC 15A-1D, 15A-1L, and 15A-1P

ATM TC 1-135 Tasks

5001
5016
5020
5021
6002
6014

ATM TC 1-137 Tasks

5001
5016
5020
5030
5031
5036

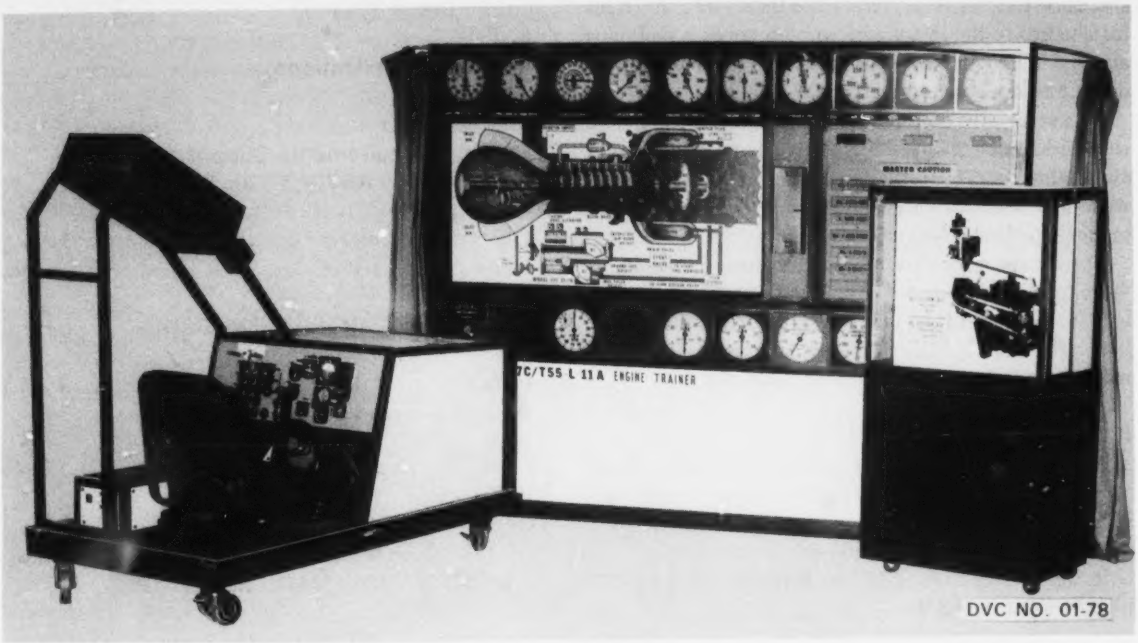
ATM TC 1-139 Tasks

5001
5003

CH-47C/T55-L-11A GAS TURBINE ENGINE TRAINER

DVC 01-78
2A27C-1

NSN 6930-01-063-7517



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use, to dynamically demonstrate the internal operation of the T55-L-11A Gas Turbine Engine, while instructing aviators and maintenance personnel in correct starting and operating procedures, and to teach maintenance personnel troubleshooting procedures and malfunction recognition. The trainer also demonstrates the effects of various engine and fuel system malfunctions, and certain operating conditions. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The device is a multipurpose turbine engine maintenance and procedure trainer which simulates the operation of the T55-11A engine as installed on the CH-47C Helicopter. The trainer is composed of the following major components:

- *a.* CH-47C Trainer Cockpit Station
- *b.* CH-47C Fuel Control Assembly
- *c.* CH-47C Engine Display Panel
- *d.* Analog Computer
- *e.* Instructor Station

The trainer station provided is a realistic facsimile of the aviator's position in the actual helicopter cockpit. All controls pertinent to the operation of the engine are functional and operable by the student. Operation of these controls causes the proper associated response to be reflected by the cockpit instruments, as well as by enlarged instruments and visual representation on the display panel. Provision is made to demonstrate changes in engine performance caused by changes in atmospheric conditions, malfunctions of engine or system components, and by improper operating procedures. (Adjustments on the fuel control assemblies are exact replicas of the adjustments found on the operational aircraft.) Manipulation of these adjustments causes appropriate effects on the display panels. These adjustments permit the student to trim the engine performance and gain actual experience in adjusting the fuel control unit.

The engine display panel utilizes dynamically animated and lighted cross-sectional views of the engine together with enlarged facsimiles of the engine instruments. An analog computer programs all instrumentation, flow indications, sound simulation, and outputs to operational aircraft test equipment. One instructor can control the entire training situation from the remotely located console.

Physical Information:

Display panel: 136" x 46" x 110" (81" retracted); 200 lb
Cockpit station: 80" x 46" x 84", 500 lb
Dual fuel control: 48" x 38" x 77"; 600 lb
Computer: 100" x 28" x 80"; 1,200 lb
Instructor console: 41" x 29" x 45"; 200 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110/220 vac, 60 cycle

Applicable Publications:

Commercial Handbook of Operation and Maintenance Instructions

Reference Publications:

TM 55-1520-227 Series

Training Requirements Supported:

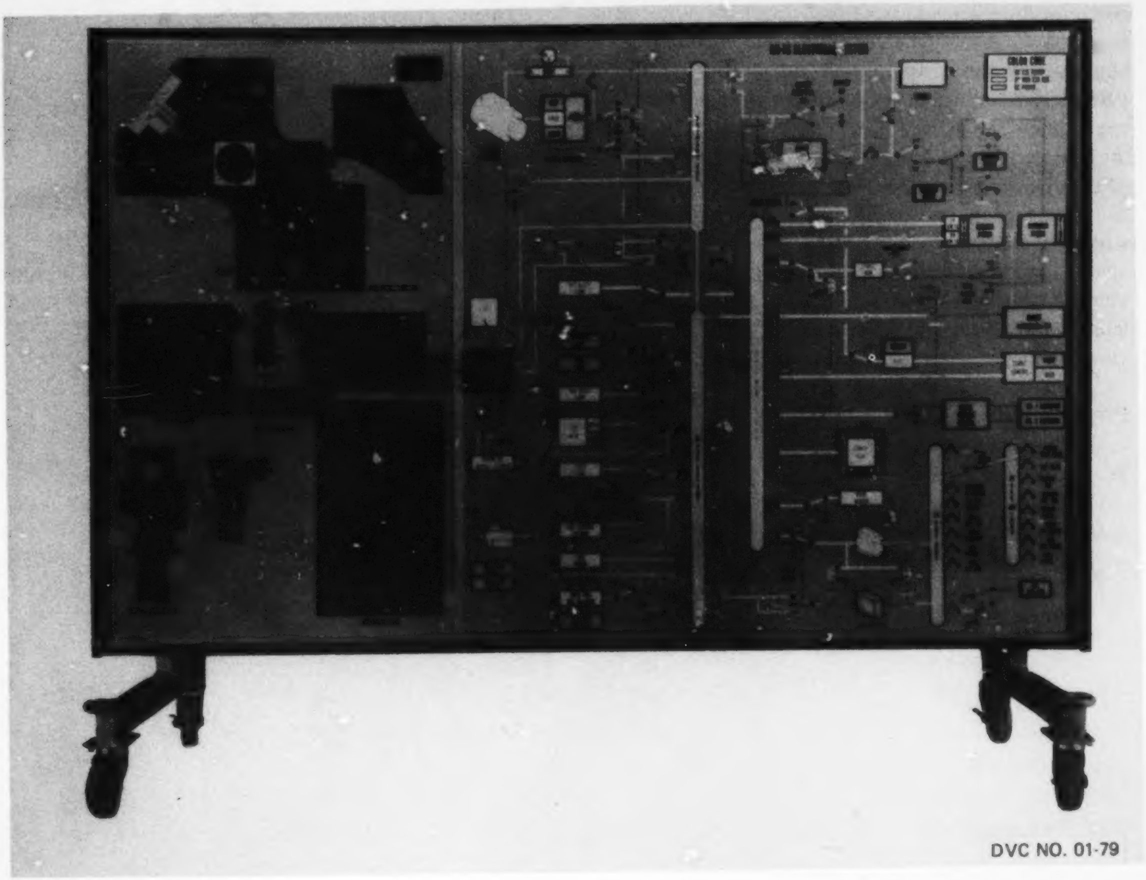
SM 551-68B Tasks

2286 2287 2288 2295

AH-1G ELECTRICAL SYSTEMS DISPLAY PANEL

DVC 01-79

NSN 6930-01-063-7514



DVC NO. 01-79

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is for classroom use, to provide a realistic environment for familiarization of maintenance personnel with the theory of operation of the AH-1G Helicopter Electrical System. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The Electrical Systems Trainer displays the Electrical Systems in animated, sectionalized, pictorial, and backlighted form. It provides the instructor with the controls, backlighted schematic, and built-in electrical logic which will permit demonstrations of the theory of systems operation and the recommended procedures for analyzing normal versus abnormal operation, isolating the malfunctions, and making the proper adjustments. The display panel shows the simulated helicopter controls and indicators relative to the electrical system.

Physical Information:
102'' x 22'' x 72''; 550 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac, 60 cycle

Applicable Publications:
Handbook of Operating Instructions, Maintenance and Repair Parts

Reference Publications:
TM 55-1520-221 Series

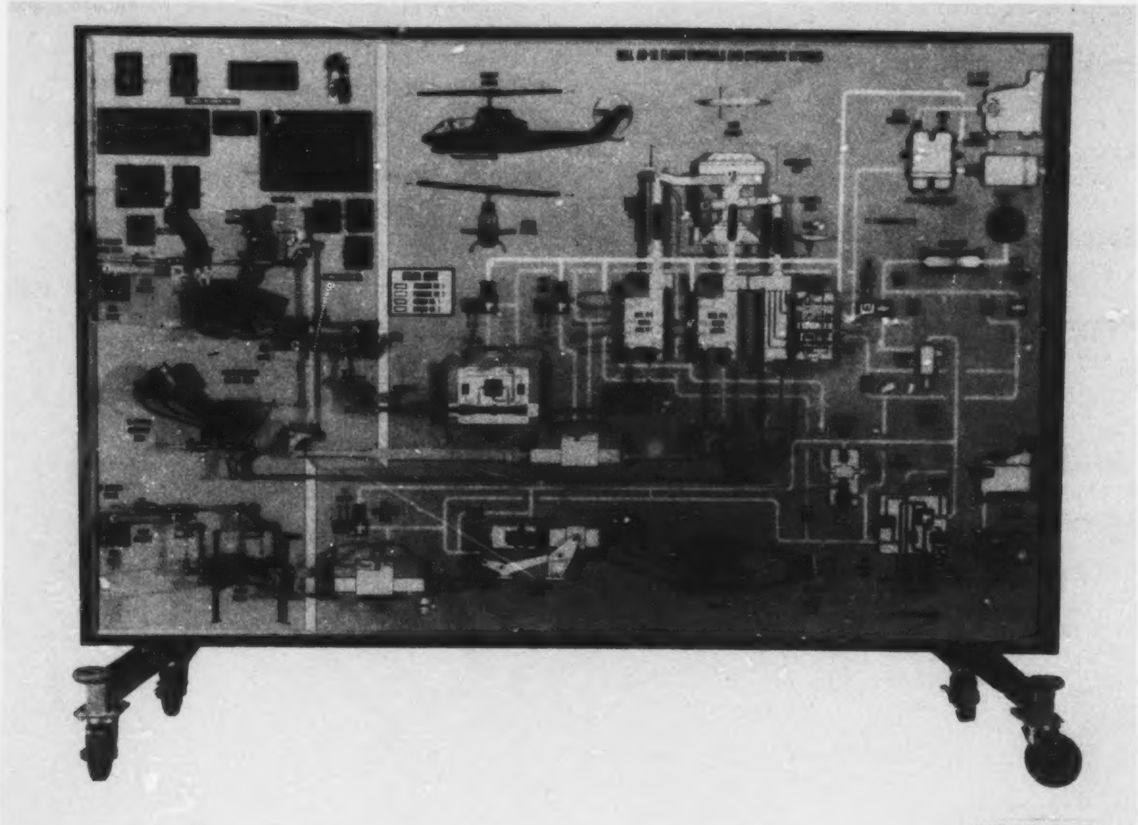
Training Requirements Supported:

SM 551-68F Tasks

1003
1061
1062
1063
1004

AH-1G HYDRAULIC SYSTEMS DISPLAY PANEL TRAINER

DVC 01-80 **NSN 6930-01-063-7539**



DVC NO. 01-80

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is used for classroom use to provide a realistic environment for familiarization of aviation and maintenance personnel with the operation and maintenance of theory of the AH-1G Hydraulic System. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is a mobile unit, consisting of an Instructor's Control Panel, an Aircraft Control Panel, and an Annunciator Panel. Actual aircraft controls are mounted on the panel to the left of the backlighted schematic representation of the hydraulic system. Activation of these controls creates an illuminated path, which graphically depicts

DVC 01-80

the sequence of events occurring in the operation of the AH-1G Hydraulic System.

Physical Information:
102'' x 22'' x 72''; 650 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac, 60 cycle

Applicable Publications:
Handbook of Operating and Maintenance Instructions

Reference Publications:
TM 55-1520-221 Series

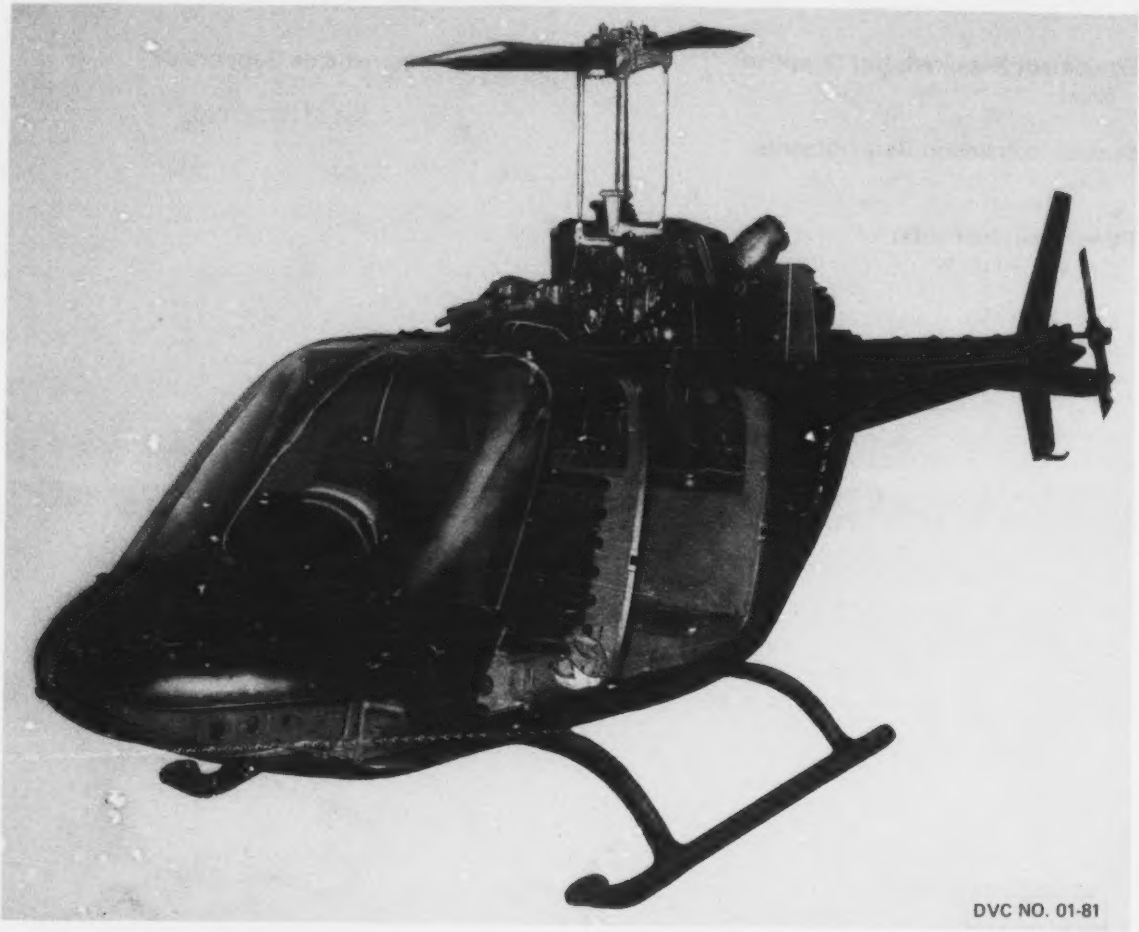
Training Requirements Supported:

SM 551-67X Tasks

2005 2337 2338 2340

OH-58 SERIES COMPOSITE SYSTEMS TRAINER

DVC 01-81 **OH-58A**	**NSN 6930-01-063-7541**
DVC 01-81A **OH-58C**	**NSN Pending**


DVC NO. 01-81

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

DVC 01-81

Purpose of Trainer:

The trainer is for classroom use, providing a realistic environment for instruction of aviation and maintenance personnel in the operation and maintenance of the OH-58A and OH-58C Helicopters. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of an actual OH-58A or OH-58C Helicopter airframe and skid gear. The main rotor blades are shortened, with one blade scarf-cut to show internal blade structure. The tail rotor blades are complete. An electric motor within the trainer is used to turn both the main and tail rotors at a slow rate. The shaft of the motor is provided with a torque limiter to ease starting loads and increase safety. The flight control system is complete with all sticks, linkage, and hydraulic aids. The helicopter-type hydraulic pump is nonoperational, and its function is simulated by an electrically driven hydraulic power cart. The complete fuel and oil systems are included. The instrument panel is provided with a complete engine instrument cluster (less ammeter wiring) and caution/warning lights. Other instruments and avionics panels are simulated by plastic-covered photographs. Fuel, oil, and hydraulic systems components, circuitry, and other electrical components and circuits at and above the work deck are provided. The tail rotor gear box and the transmission are not lubricated and are provided with clear plastic covers over cutaway sections.

The portable hydraulic power cart supplies hydraulic power to the trainer, simulating normal action of the engine-driven hydraulic pump.

Physical Information:

Trainer: 448'' x 77'' x 115''; 1,404 lb
Hydraulic power cart: 34'' x 28'' x 40''; 273 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, 15 A, single-phase
220 vac, single-phase

Applicable Publications:

Handbook of Operating Instructions and Repair Parts

Reference Publications:

TM 55-1520-228 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-5-4
5-8-3
5-13-8

ARTEP 17-205 Tasks

2-7-1
2-7-2
2-7-3
2-7-4

ARTEP 17-385 Tasks

2-7-1
2-7-2
2-7-3

ARTEP 55-89 Tasks

5-C-2-C-5
5-E-2-E-2
5-E-2-E-3
5-E-2-E-4
5-E-2-E-6
5-E-2-E-7
5-E-2-E-8
5-E-2-E-9
5-F-2-F-1
5-F-2-F-2
5-F-2-F-3
5-F-2-F-8
5-H-2-H-4
5-L-2-L-1

ARTEP 55-167 Tasks

5-E-2
5-E-3
5-E-4
5-E-5

ARTEP 57-55 Tasks

5-8-A
5-8-D
5-10-A
5-10-D
7-8-G
7-11-A
7-11-B
7-11-E
7-13-A
7-13-B
7-13-E
7-14-I

DVC 01-81

MOSC 15-1D, 67V, and 100C

ATM TC 1-137 Tasks

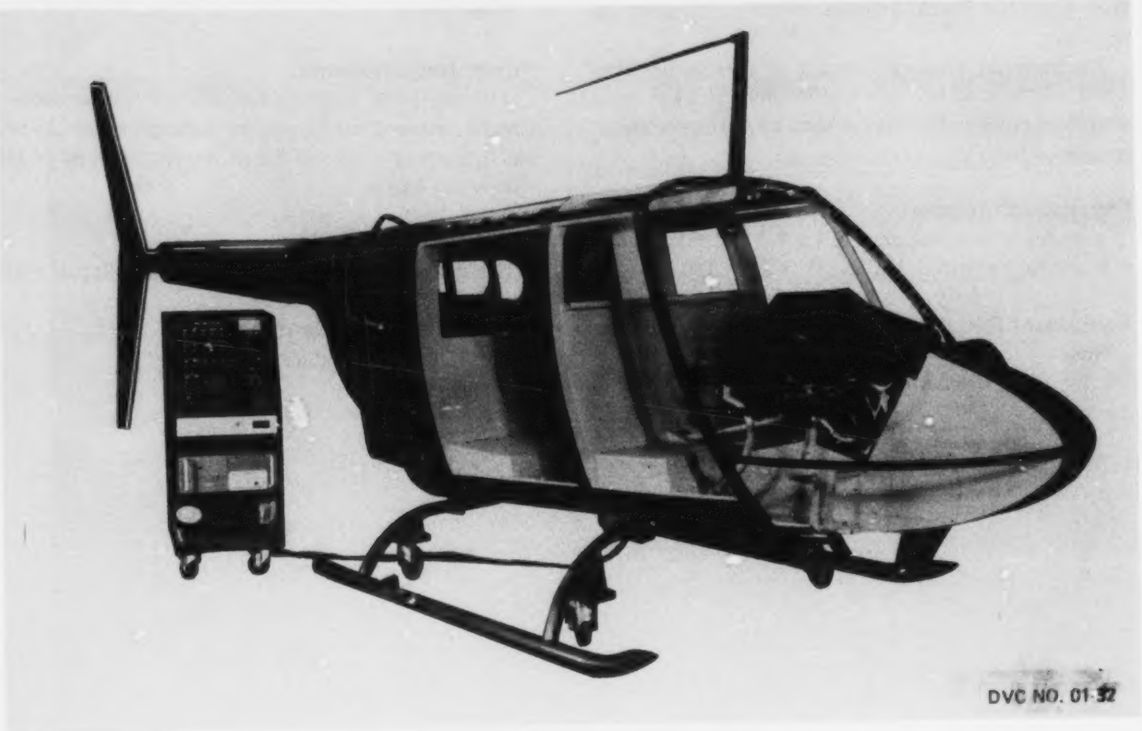
1501
1502
3501
4005
4009
6501
6502

SM 551-67V Tasks

1711
1712
1713
1714
1715
1716
1717
1718
1719
1720
1721
1722
1723
1724
1725
1726
2124
2134
2145
2154
2237
2239
2257
2258
2259
3004
3157
3173
3174
3175
3176

OH-58A AVIONICS SYSTEMS TRAINER

DVC 01-82 **NSN 6930-01-063-7542**



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is for classroom use in the support of maintenance training for the OH-58A Helicopter. It provides a realistic environment for presenting the avionics components of the production aircraft. Operational equipment and system simulation is used to demonstrate theory, installation, removal, and corrective maintenance of the communication, navigation, and associated equipment and systems of the OH-58A Helicopter.

Functional Description:

The trainer is a simulated OH-58A Helicopter airframe, less those items not a part of the communication, electronic, and navigation systems. The following avionics systems are installed in the trainer and operate as in the operational helicopter:

a. AN/ASN-43, Gyro Compass
b. AN/ARC-72, IFF Transponder
c. AN/ARN-89, ADF/Direction Finder
d. AN/ARC-116, UHF-AM Radio
e. AN/ARC-115, VHF-AM Radio
f. AN/ARC-114, VHF-FM Radio
g. KY-28, Speech Security
h. C-6533/ARC, Interphone

DVD 01-82

Caution and warning lights which normally illuminate during ground checkout of avionics equipment are operative.

The instructor's console contains 20 insertion switches which can be used to cause malfunctions in all systems with the exception of the speech security and Government-installed VHF-FM systems.

Physical Information:

Avionics system trainer: 332" x 77" x 109"; 700 lb
Instructor's console: 48" x 21" x 23"; 180 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, 10 A, single-phase, 60 cycle, power source. Can be operated on 28 vdc by connecting the 28-vdc external power source to the receptacle provided on the side of the trainer.

Applicable Publications:

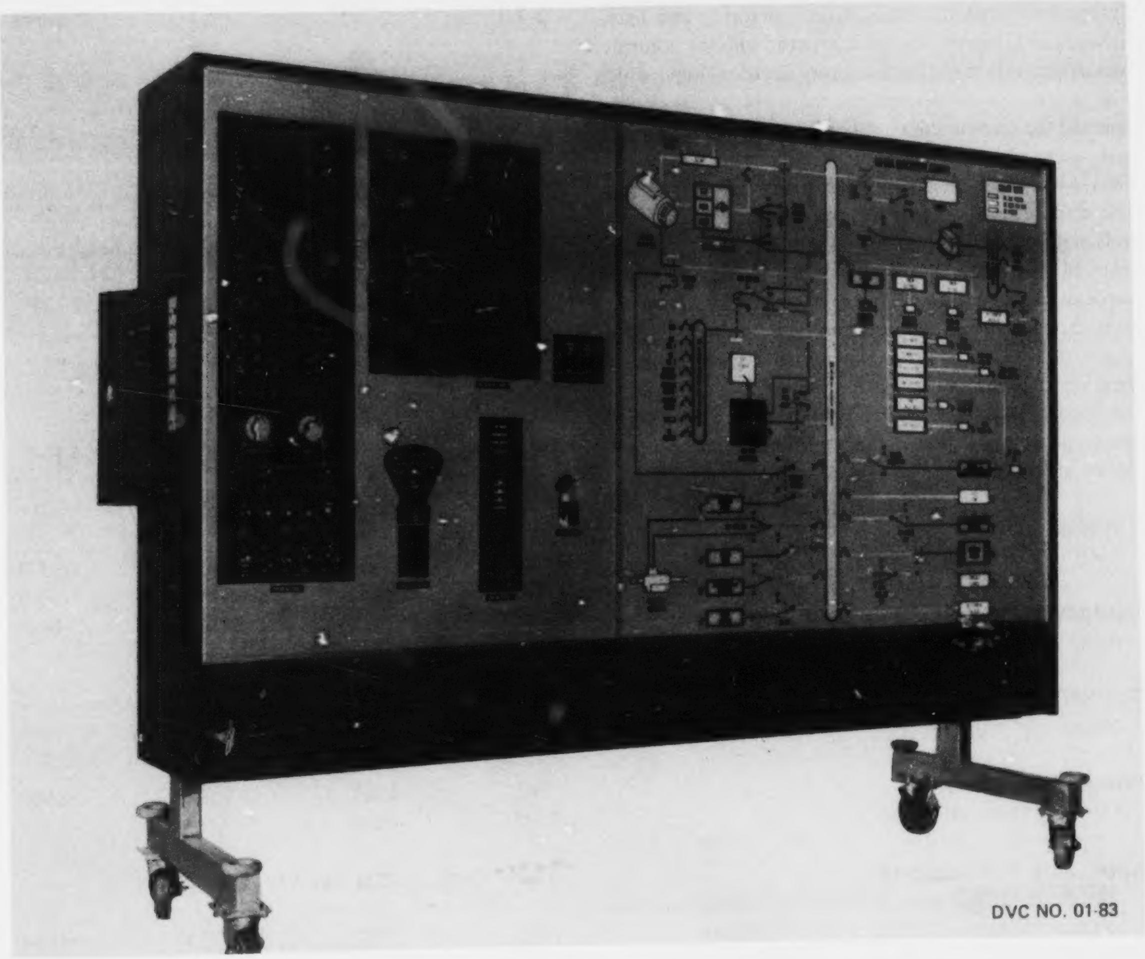
Handbook of Operating Instructions and Repair Parts

Reference Publications:

TM 55-1520-228 Series

OH-58A ELECTRICAL SYSTEMS TRAINER

DVC 01-83 **NSN 6930-01-064-4421**



DVC NO. 01-83

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom training, providing a realistic environment for familiarization and instruction of personnel in the operation and maintenance of the OH-58A Electrical Systems. The specific training requirements supported are shown following the descriptive data.

DVC 01-83

Functional Description:

The Electrical Systems Trainer displays the Electrical System in animated, sectionalized, pictorial, and backlighted form. It provides the instructor with the controls, backlighted schematic, and built-in electrical logic which will permit demonstration of the theory of systems operation and the recommended procedures for analyzing normal versus abnormal operations, isolating the malfunctions, and making the proper adjustments or replacements. The display panel shows the simulated helicopter controls and indicators relative to the electrical systems. The Instructor's Control Panel is installed in the left side of the device for concealment from the student's view. Simulated helicopter panels, instruments, nomenclatures, gages, and meters on the display are depicted at twice their actual size. Colors on the panels and controls are the same as on the operational helicopter. The instrument representations are modified meter movements or motor-driven animations.

Physical Information:

100" x 32" x 72", 550 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, 15 A, 60 cycle

Applicable Publications:

Handbook of Operating Instructions and Repair Parts

Reference Publications:

TM 55-1520-228 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-5-4
5-8-3
5-13-8

ARTEP 17-205 Tasks

2-7-1
2-7-2
2-7-3
2-7-4

ARTEP 17-385 Tasks

2-7-1
2-7-2
2-7-3

ARTEP 55-89 Tasks

5-C-2-C-5
5-E-2-E-2
5-E-2-E-3
5-E-2-E-4
5-E-2-E-6
5-E-2-E-7
5-E-2-E-8
5-E-2-E-9
5-F-2-F-1
5-F-2-F-2
5-F-2-F-3
5-F-2-F-8
5-H-2-H-4
5-L-2-L-1

ARTEP 55-167 Tasks

5-E-2
5-E-3
5-E-4
5-E-5

ARTEP 57-55 Tasks

5-8-A
5-8-D
5-10-A
5-10-D
7-8-G
7-11-A
7-11-B
7-11-E
7-13-A
7-13-B
7-13-E
7-14-I

MOSC 15-1D, 67V, and 100C

ATM TC 1-137 Tasks

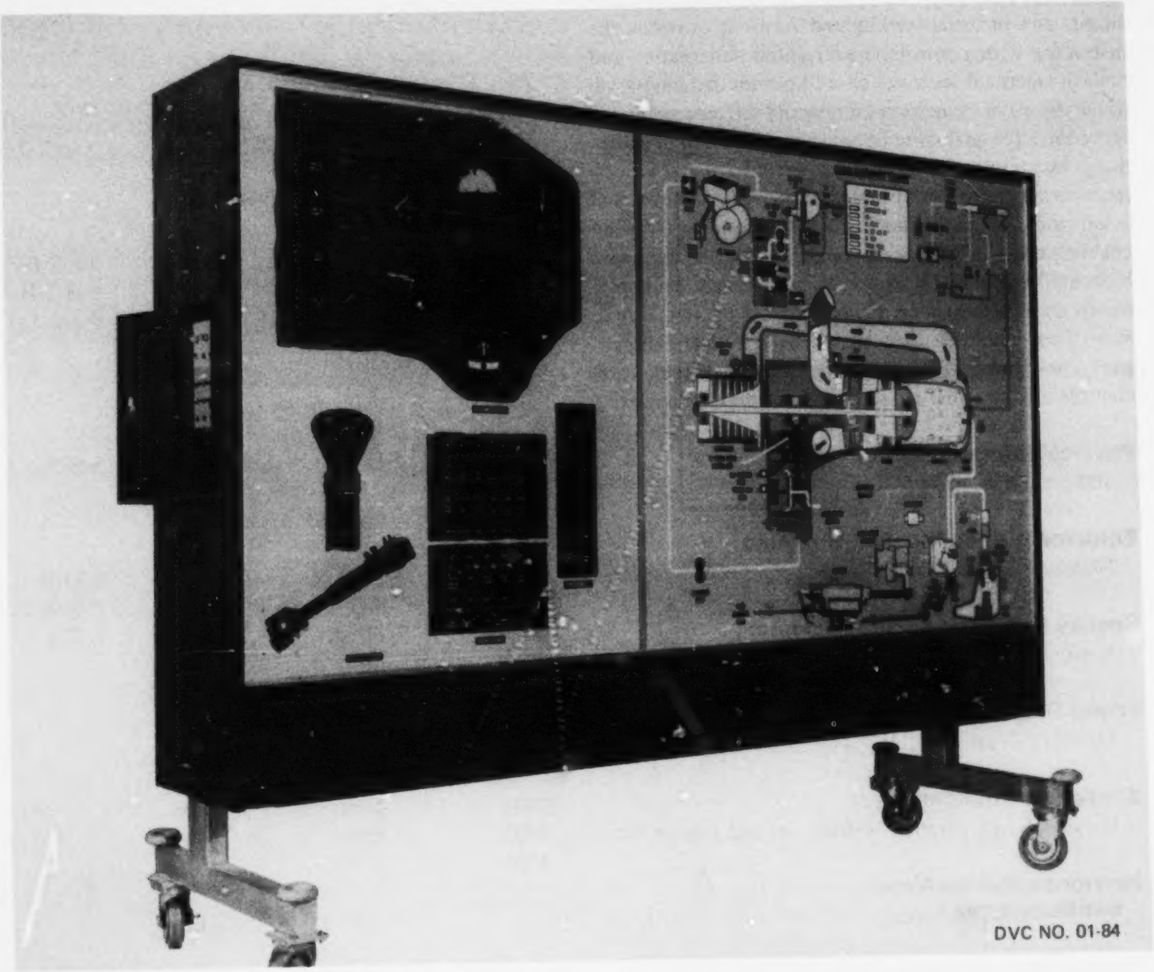
1501
1502
3501
4009
6501
6502

SM 551-67V Tasks

1711
1712
1713
1714
1715
1716
1717
1718
1719
1720
1721
1722
1723
1724
1725
1726
2054
2055
2056
2145
2261
2262
2263

OH-58A INSTRUMENT SYSTEMS PANEL TRAINER

DVC 01-84 NSN 6930-01-063-7540



DVC NO. 01-84

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use to provide a realistic environment for familiarization and instruction of flight and maintenance personnel in the operation and troubleshooting procedures for the OH-58A Helicopter Instrument Systems. The specific training requirements supported are shown following the descriptive data.

DVC 01-84

Functional Description:

The trainer displays the systems in animated, sectionalized, and pictorial backlighted form. It provides the instructor with controls, backlighted schematic, and built-in electrical logic which will permit demonstration of the theory of systems operation and the recommended procedures for analyzing normal versus abnormal operations, isolating malfunctions, and making proper adjustments or replacements. Simulated helicopter controls and panels are located on the left half of the display panel enabling the instructor to operate the controls and avoid blocking the student's view. The simulated helicopter panels and instruments are depicted at twice their actual size. This increase scale includes all nomenclatures, gages, and meters. Colors on the helicopter panel and controls are the same as in the operational helicopters.

Physical Information:

100" x 32" x 93"; 550 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, 15 A, 60 cycle

Applicable Publications:

Handbook of Operating Instructions and Repair Parts

Reference Publications:

TM 55-1520-228 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-5-4
5-8-3
5-13-8

ARTEP 17-205 Tasks

2-7-1
2-7-2
2-7-3
2-7-4

ARTEP 17-385 Tasks

2-7-1
2-7-2
2-7-3

ARTEP 55-89 Tasks

5-C-2-C-5
5-E-2-E-2
5-E-2-E-3
5-E-2-E-4
5-E-2-E-6
5-E-2-E-7
5-E-2-E-8
5-E-2-E-9
5-F-2-F-1
5-F-2-F-2
5-F-2-F-3
5-F-2-F-8
5-H-2-H-4
5-L-2-L-1

ARTEP 55-167 Tasks

5-E-2
5-E-3
5-E-4
5-E-5

ARTEP 57-55 Tasks

5-8-A
5-8-D
5-10-A
5-10-D
7-8-G
7-11-A
7-11-B
7-11-E
7-13-A
7-13-B
7-13-E
7-14-I

MOSC 15-1D, 15-1P, 67V, and 100G

ATM TC 1-137 Tasks

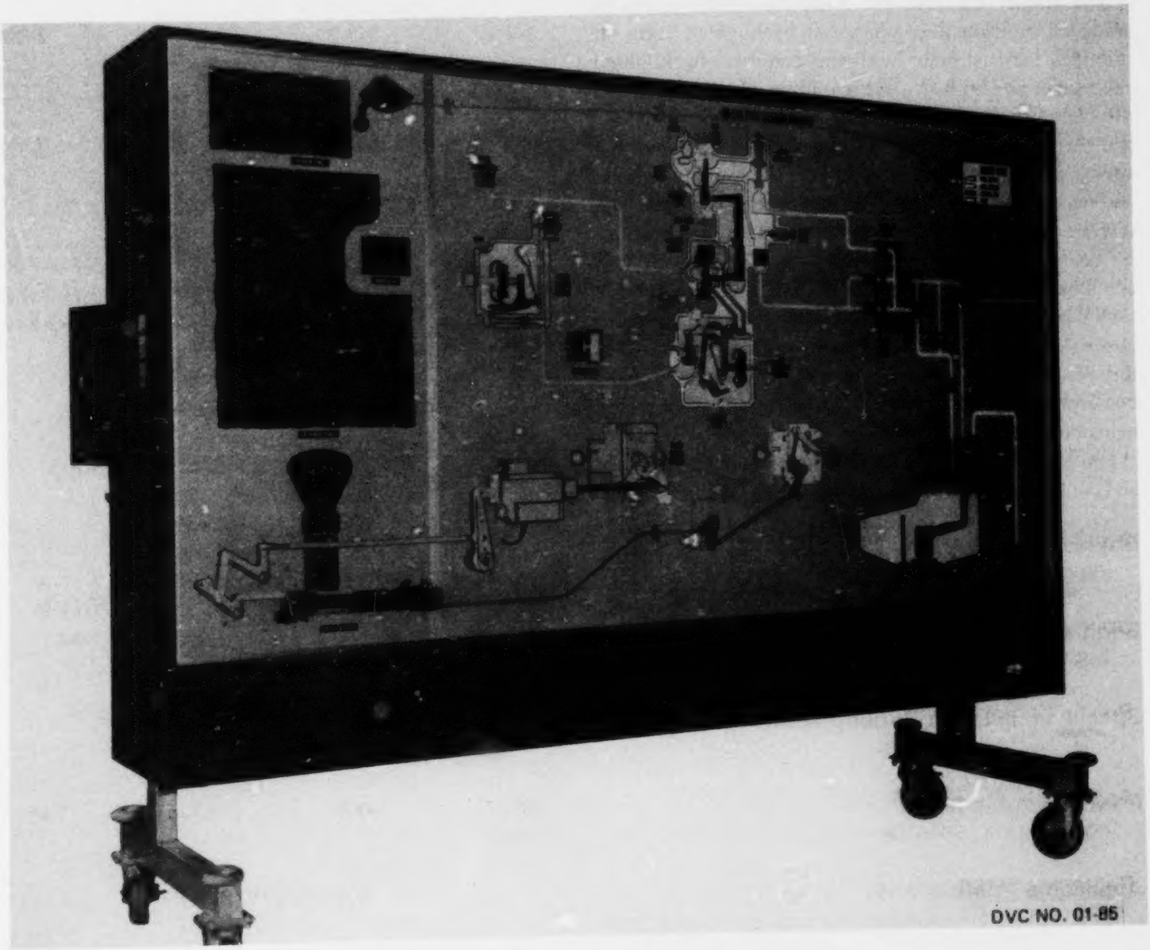
4501
4502
4503
4504
4506
4507
4508
4509
4510
4512
4513

SM 551-67V Tasks

1711
1712
1713
1714
1715
1716
1717
1718
1719
1720
1721
1722
1723
1724
1725
1726
2054
2055
2056
2061
2145
2214
2260
2261

OH-58A FUEL SYSTEMS PANEL TRAINER

DVC 01-85 **NSN 6930-01-063-7544**



DVC NO. 01-85

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use to provide a realistic environment for familiarization and instruction of personnel in the operation and maintenance of the OH-58A Helicopter Fuel Systems. The specific training requirements supported are shown following the descriptive data.

DVC 01-85

Functional Description:

The trainer displays the complete Fuel System in animated, sectionalized, pictorial backlighted form. It provides the instructor with the controls, backlighted schematic, and built-in electrical logic which will permit the demonstration of the theory of systems operations and the recommended procedures for analyzing normal versus abnormal operations, isolating the malfunctions, and making the proper adjustments or replacements. The display panel of the trainer shows the simulated helicopter controls and indicators relative to the Fuel System and a backlighted schematic of that system. The instructor's panel is installed within the left side of the trainer to conceal it from the student's view. There are controls on this panel which permit the instructor to insert specific conditions of normal or abnormal nature. The simulated helicopter panels and instruments on displays are depicted at twice their actual size. Colors on the helicopter panels and controls are the same as in the operational helicopter.

Physical Information:

100" x 32" x 71"; 550 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, 15 A, 60 cycle

Applicable Publications:

Handbook of Operating Instructions and Repair Parts

Reference Publications:

TM 55-1520-228 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-5-4
5-8-3
5-13-8

ARTEP 17-205 Tasks

2-7-1
2-7-2
2-7-3
2-7-4

ARTEP 17-385 Tasks

2-7-1
2-7-2
2-7-3

ARTEP 55-89 Tasks

5-C-2-C-5
5-E-2-E-2
5-E-2-E-3
5-E-2-E-4
5-E-2-E-6
5-E-2-E-7
5-E-2-E-8
5-E-2-E-9
5-F-2-F-1
5-F-2-F-2
5-F-2-F-3
5-F-2-F-8
5-H-2-H-4
5-L-2-L-1

ARTEP 55-167 Tasks

5-E-2
5-E-3
5-E-4
5-E-5

ARTEP 57-55 Tasks

5-8-A
5-8-D
5-10-A
5-10-D
7-8-G
7-11-A
7-11-B
7-11-E
7-13-A
7-13-B
7-13-E
7-14-1

MOSC 15-1D, 67V, and 100G

ATM TC 1-137 Tasks

1016
1501
4009
6501
6502

SM 551-67V Tasks

1701
1711
1712
1713
1714
1715
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2124
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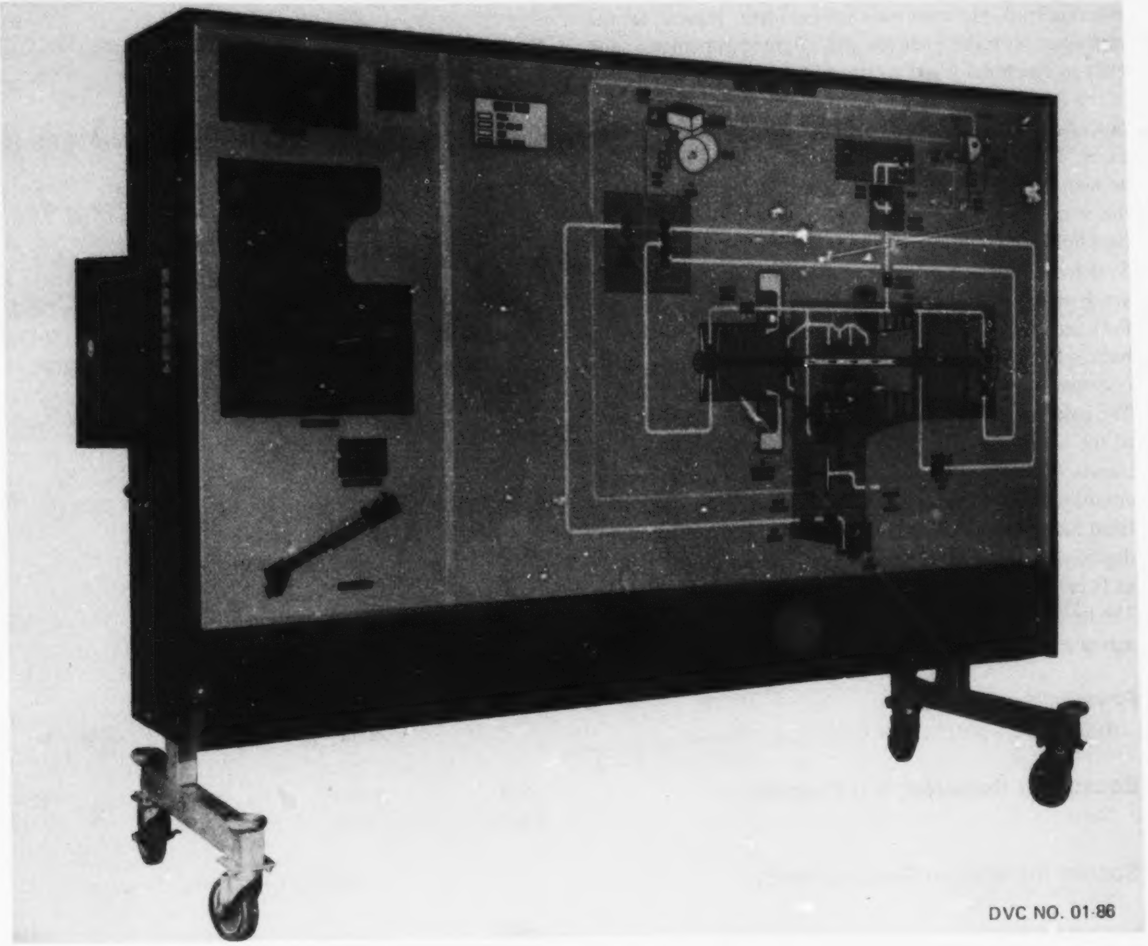
2262
3235

OH-58A ENGINE OIL SYSTEMS TRAINER

DVC 01-86 **NSN 6930-01-064-4422**



DVC NO. 01-86

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use to provide a realistic environment for familiarization and instruction of personnel in the operation and maintenance of the OH-58A Helicopter Oil Systems. The specific training requirements supported are shown following the descriptive data.

DVC 01-86

Functional Description:

The trainer displays the Oil System in animated, sectionalized, pictorial backlighted form. It provides the instructor with the controls, backlighted schematic, and built-in electrical logic which will permit demonstration of the theory of systems operation and the recommended procedures for analyzing normal versus abnormal operations, isolating malfunctions, and making the proper adjustments or replacements. The display panel shows the simulated helicopter controls and indicators and a backlighted schematic of the engine relative to the Oil Systems. Component representations within the schematic are depicted in the appropriate cross-sectional or external form and are animated by means of concealed motors or backlighting techniques, except where they are hand-operated, then they are the same as on the helicopter. The Instructor's Control Panel is installed in the left side of the trainer to conceal it from the student's view. By means of this panel, the instructor can insert specific conditions of normal or abnormal operation. The simulated helicopter panel and instruments on the display are depicted at twice their actual size. Colors on the panels and controls are the same as in the operational helicopter. The instrument representations are modified meter movements or motor-driven animations.

Physical Information:

100" x 32" x 93"; 550 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, 15 A, 60 cycle

Applicable Publications:

Handbook of Operating Instructions and Repair Parts

Reference Publications:

TM 55-1520-228 Series

Training Requirements Supported:

ARTEP 17-205 Tasks

2-7-1
2-7-2
2-7-3
2-7-4

ARTEP 17-385 Tasks

2-7-1
2-7-2
2-7-3

ARTEP 55-89 Tasks

5-C-2-C-5
5-E-2-E-2
5-E-2-E-3
5-E-2-E-4
5-E-2-E-6
5-E-2-E-7
5-E-2-E-8
5-E-2-E-9
5-F-2-F-1
5-F-2-F-2
5-F-2-F-8
5-H-2-H-4
5-L-2-L-1

ARTEP 55-167 Tasks

5-E-2
5-E-3
5-E-4
5-E-5

ARTEP 57-55 Tasks

5-5-4
5-8-3
5-13-8

MOSC 15-1D, 67V, and 100G

ATM TC 1-137 Tasks

1501
1502
1503
3501
4007
4009
6501
6502

SM 055-67V Tasks

1702
1704
1711
1712
1713
1714
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2056
2120
2237
2277
2278

GENERAL AVIATION INSTRUMENT TRAINER, FIXED-WING, MULTI-ENGINE

DVC 01-88
2B30
NSN 6930-01-063-7545

DVC 01-88A
2B27A
NSN 6930-01-063-7546

U.S. ARMY
GAT-2

DVC NO. 01-88

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide an efficient, safe, and economical means for initial training of aviators in the techniques of instrument flight in fixed-wing, multi-engine aircraft, and for maintaining aviator proficiency in these techniques after completion of formal training. The trainer provides a means for basic and refresher instruction in cockpit procedures, instrument flying, and radio navigation for fixed-wing, multi-engine aircraft. The specific training

requirements supported are shown following the descriptive data.

Functional Description:

The trainer includes a trainee station, similar to a T-42 Aircraft cockpit, mounted on a motion platform. Two side-by-side seats are provided for the pilot and co-pilot stations. A third seat is located behind the co-pilot seat for the instructor station. Cockpit instruments and controls are similar to those of the T-42 Aircraft. A solid state computer provides for simulation of aerodynamic effects, atmospheric and ground effects, and appropriate instrument responses. A ground path recorder provides a record of enroute and terminal performances. The trainer also includes a radio aids package to allow simulated cross-country flights, instrument approaches, ILS procedures, and radio navigation facilities. Sound simulation provides realistic engine noise, aerodynamic sound, tire screech, and stall warning to the aviator. A gear warning light is provided on the instrument panel. The two devices vary in capability. In the DVC 01-88, engine failure is the only malfunction which can be induced, while in the DVC 01-88A, engine failure plus inverter, various instruments, and landing gear failure may be induced. The DVC 01-88 is configured so that the VOR, ILS, and NDB stations are fixed and cannot be changed without rewiring. DVC 01-88A has the ILS, VOR, and NDB stations on computer cards which adds the capability to change training areas easily and quickly.

Physical Information:

156'' x 84'' x 90''; 3,000 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Classroom, 180'' long, 120'' wide, and 120'' high, with climatic control that maintains the ambient temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

110/220 vac, 3-phase, 50/60 cycle

Applicable Publications:

Commercial Handbook of Operating and Maintenance Instructions

Reference Publications:

None

Training Requirements Supported:

MOSC 15-2E, 15-2F, 15-2J, 100P, and 100Q

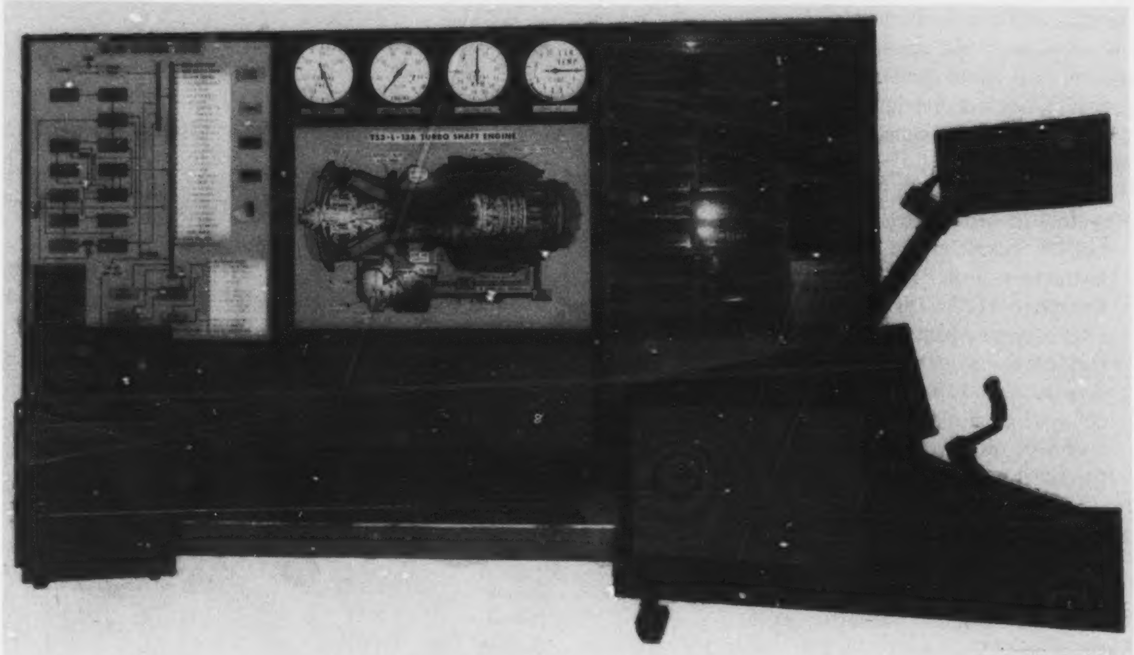
ATM TC 1-145 Tasks

1502	3003	4005	4506
1503	3004	4006	4507
1504	3006	4008	4508
1505	3502	4501	4509
2501	3503	4502	4510
2502	4002	4503	4512
3001	4003	4504	4513
3002	4004	4505	6501

UH-1H/T53-L-13A ENGINE TRAINER

DVC 01-89
2A27D

NSN 6930-01-063-7547


DVC NO. 01-89

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to dynamically demonstrate the internal functioning of the T53-L-13A Engine and the changes in engine performance caused by various engine or systems malfunctions, improper operating procedures, or by external parameters such as altitude and temperature. The trainer provides the aviator and maintenance personnel with basic and refresher training in proper starting, run up, operating procedures, malfunction recognition, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer uses a dynamically animated and backlighted three-dimensional artistic cross-section of the T53-L-13A Engine, an analog computer, and facsimiles of the engine instruments and controls to demonstrate engine operation. Engine sounds are realistically simulated for normal and abnormal operation. A trainee's station is provided which is a realistic facsimile of the operational helicopter cockpit. All controls and instruments pertinent to the operation of the engine are operable by the trainee and cause the proper associated responses in the engine cross-section panel. The oil, electrical, and hydraulic systems are also depicted by backlighted display panels. These panels have the option of being controlled manually by the instructor or through the computer as a function of student input. Attached to the left side of the engine display panel is the main transmission and lubrication system display panel which is color-coded and backlighted. Attached to the right side of the engine display panel is the master caution systems display panel.

Physical Information:

UH-1H cockpit station: 79" x 42" x 73"; 575 lb
Instructor console: 41" x 29" x 46"; 230 lb
Computer: 111" x 20" x 80"; 1,500 lb
Engine display panel: 12" x 72" x 99"; 400 lb
Caution display panel: 6" x 60" x 99"; 250 lb
Transmission display panel: 6" x 60" x 99"; 250 lb
Oil systems display panel: 6" x 60" x 99"; 400 lb
Hydraulic display panel: 6" x 72" x 99"; 400 lb
Electrical display panel: 6" x 60" x 99"; 250 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Classroom, 456" x 420" x 120" high, with climatic control that maintains the ambient room temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

110/220 vac, 30 A, 60 cycle

Applicable Publications:

NAVTRADEV P-3605, Operation and Maintenance Guide with Parts List for Power Plant Simulator, UH-1D/H/T53-L-13A, Device 2A27D

Reference Publications:

TM 55-2840-299 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-5-4
5-8-3
5-13-8

ARTEP 55-89 Tasks

5-C-2-C-5
5-E-2-E-2
5-E-2-E-3
5-E-2-E-4
5-E-2-E-6
5-E-2-E-7
5-E-2-E-8
5-E-2-E-9
5-F-2-F-1
5-F-2-F-2
5-F-2-F-3
5-F-2-F-8
5-H-2-H-4
5-L-2-L-1

ARTEP 55-167 Tasks

5-E-2
5-E-3
5-E-4
5-E-5

ARTEP 57-5-5 Tasks

5-8-A
5-8-D
5-10-A
5-10-D
7-8-G
7-11-A
7-11-B
7-11-E
7-13-A
7-13-B
7-13-E
7-14-I

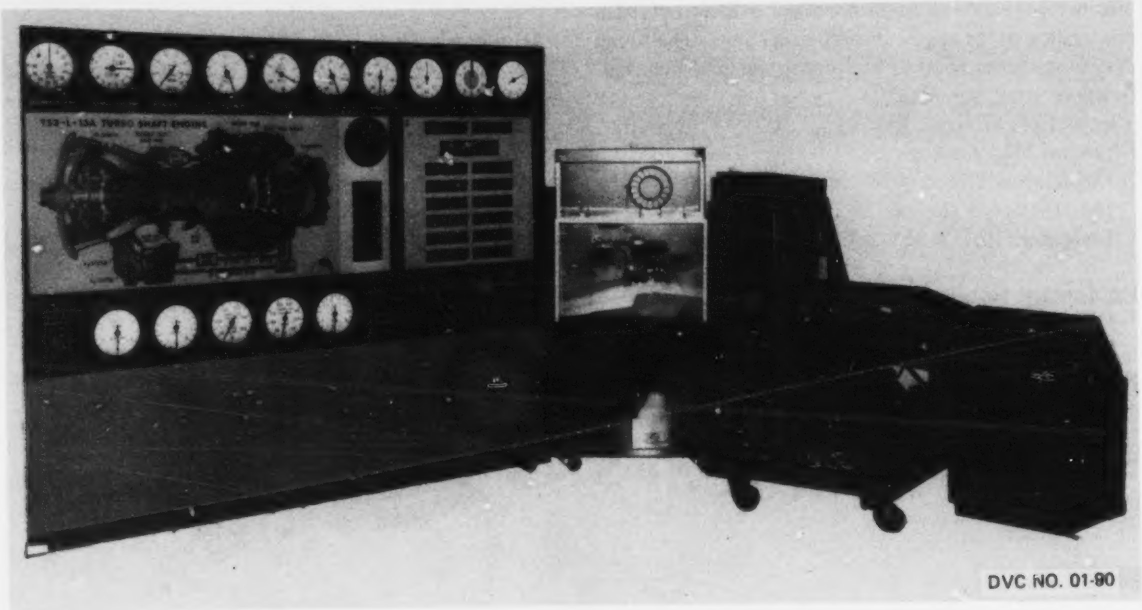
SM 011-50A Tasks

1501
1502
1503
1504
2001
2002
2003
2004
2005
2501
2502
3501
4001
4002
4003
4004
4008
4009
5008
5009
5026
5027
6501
6502

UH-1H/T53-L-13A MULTI-PURPOSE ENGINE TRAINER

DVC 01-90
2A27A-1

NSN 6930-01-063-7548



DVC NO. 01-90

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer provides aviator and maintenance personnel with basic and refresher traiing in proper starting, operating procedures, malfunction recognition, and troubleshooting procedures. The trainer dynamically demonstrates the internal functioning of the T53-L-13A Engine and the changes in engine performance caused by various engine or systems malfunctions, improper operating procedures, or by external parameters such as altitude and temperature. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer utilizes dynamically animated and lighted cross-sectional views of the engine, together with facsimilies of the engine instruments and controls, to demonstrate engine operation. Engine sounds are realistically simulated for normal and abnormal operation. A trainee's station is provided for the engine display. The station is a facsimile of the operational helicopter cockpit. All controls and instruments pertinent to the operation of the engine are functional and operable by the trainee, and cause associated responses in the display panel. The device provides for training in various procedures such as correct starting and operation, the effect of various engine and fuel system malfunctions, and effect of operating parameters (temperature, airspeed, and altitude) on engine performance.

DVC 01-90

The instructor console contains switches and controls for injecting various malfunctions into the trainer. The effects resulting from such inputs are evident by visual observation of the engine display panel units. The sound system produces aural effects consistent with the malfunctions being simulated.

Physical Information:

Display panel: 126" x 36" x 72"; 2,000 lb
UH-1H cockpit station: 79" x 42" x 73"
Computer: 101" x 36" x 72"; 2,000 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Classroom, 456" x 420" x 120" high, with climatic control that maintains the ambient room temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

110/220 vac, 60 cycles

Applicable Publications:

NAVTRADEV P-3783, Operation and Maintenance Guide for UH-1H/T53-L-13A Multi-Purpose Engine Trainer, Device 2A27A-1.

Reference Publications:

TM 55-1520-210 Series

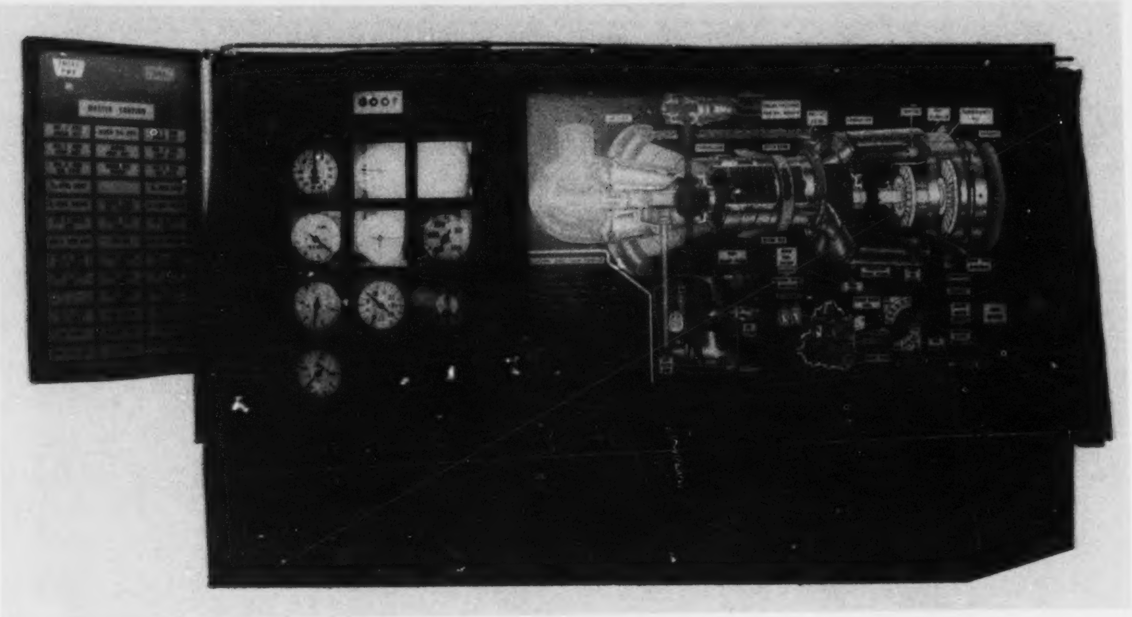
Training Requirements Supported:

SM 551-68B Tasks

2076
2077
2078
2079
2080
2082

CH-47D/T 55-L-712 TURBINE ENGINE TRAINER

DVC 01-91A **NSN None**



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To dynamically demonstrate the internal functioning of the T 55-L-712 Turbine Engine in the training of aviation and maintenance personnel: in proper starting and operating procedures, malfunction insertion and troubleshooting. Also, operating procedures and malfunction identification of the T-62 Auxiliary Power Unit (APU) are demonstrated.

Functional Description:

The trainer uses dynamically animated and lighted cross-sectional views of the T 55-L-712 Turbine Engine and the T-62 Auxiliary Power Unit (APU), together with facsimilies of both engine and APU instruments and controls, to demonstrate their operation. Engine and APU sounds are realistically simulated for normal and abnormal operation. A Cockpit Control Station is provided with all controls and instruments pertinent to the engine and the APU functional and operable by the trainee. All actions initiated by the cockpit controls cause associated response on the engine and APU displays. This device provides for training in various procedures, such as correct starting and operating techniques, the effect of various engine, APU, and fuel system malfunctions, and the effect of varying operating parameters (temperature, airspeed, and altitude) on engine performance.

DVC 01-91A

The Instructor Station contains a CRT, controls and switches which allow full engine and APU control remoted from the Cockpit Station. The Instructor Station has the capability for malfunction insertion and logic tree display. The actions initiated will result in responses on the engine display or APU as appropriate.

Physical Information:

Engine Display: 160'' wide x 110'' high x 42'' deep; weight 2500 lb.

APU Display: 124'' wide x 110'' high x 36'' deep; weight 1500 lb.

Cockpit Station: 72'' wide x 78'' high x 84'' deep; weight 400 lb.

Fuel Control Valve: 48'' wide x 72'' high x 36'' deep; weight 120 lb.

Instrument Console: 30'' wide x 80'' high x 25'' deep; weight 150 lb.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110/220 vac, 60 Hz

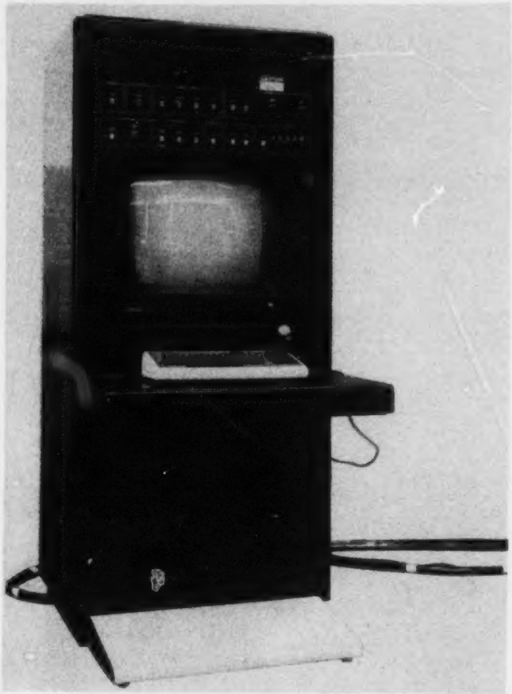
Applicable Publications:
None

Reference Publications:
TM 55-2840-254-23 Series

Training Requirements Supported:
MOSC 68B

DVC 01-91A

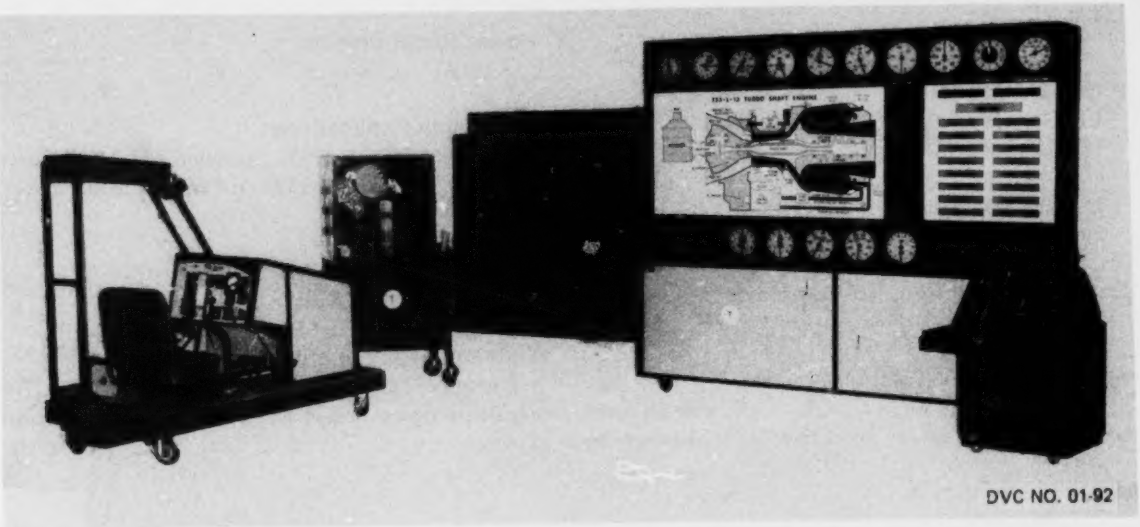
DVC 01-91A



UH-1H/T53-L-13 MULTI-PURPOSE ENGINE TRAINER

DVC 01-92
2A27B-1

NSN 6930-01-063-7550



DVC NO. 01-92

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to dynamically demonstrate the internal functioning of the T53-L-13 engine and the changes in engine performance caused by various engine or systems malfunctions, improper operating procedures, or by external parameters such as altitude and temperature. The trainer provides aviator and maintenance personnel with basic and refresher training in proper starting, operating procedures, malfunction recognition, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The device consists of a cockpit facsimile for the UH-1H Helicopter, an instructor station, and an analog computer.

The trainer utilizes dynamically animated and backlighted cross-sectional views of the engine, an analog computer, and facsimiles of the engine instruments and controls to demonstrate engine operation. Engine sounds are realistically simulated for normal and abnormal operation. A trainee's station is provided which is a facsimile of the operational helicopter cockpit. All controls and instruments pertinent to the operation of the engine are functional and operable by the trainee and cause associated responses in the display panel. The device provides for training in various procedures such as correct engine starting and operation, the effect of various engine and fuel system malfunctions, and the effect of operating parameters (temperature, airspeed, and altitude) on engine performance.

The instructor console contains switches and controls for injecting various inputs and malfunctions in the trainer.

DVC 01-92

The effects resulting from such inputs are evident by visual observation of the engine display panel units. The sound system produces aural effects consistent with the operating condition being simulated.

Physical Information:

UH-1H cockpit station: 79'' x 42'' x 73''
Display panel: 126'' x 36'' x 75''
Computer: 112'' x 35'' x 79''
Instructor console: 41'' x 29'' x 45''
Fuel control and cabinet: 30'' x 37'' x 71''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Classroom, 456'' x 420'' x 120'' high, with climatic control that maintains the ambient room temperature at 70°F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

110/220 vac, 60 cycle

Applicable Publications:

NAVTRADEV P-3785, Operation and Maintenance Guide of UH-1H/T53-L-13 Multi-Purpose Engine Trainer, Device 2A27B-1

Reference Publications:

TM 55-2840-229 Series

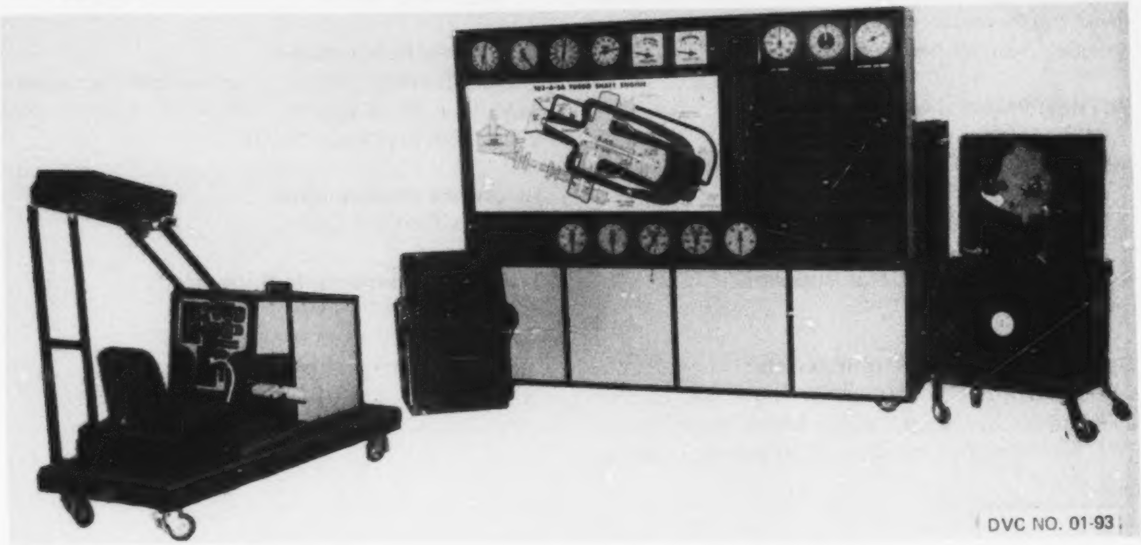
Training Requirements Supported:

Used in 67Y10 course. Will be updated to T53-L-703 engine configuration and used in 68B Powerplant Repair Course.

OH-6A(LOH)/T63-A-5A MULTI-PURPOSE ENGINE TRAINER

DVC 01-93
2A27B-2

NSN 6930-01-063-7551



DVC NO. 01-93

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to dynamically demonstrate the internal functioning of the T63-A-5A Engine and the changes in engine performance caused by various engine or systems malfunctions, improper operating procedures, or by external parameters such as altitude and temperature. The trainer provides aviator and maintenance personnel with basic and refresher training in proper starting, operating procedures, malfunction recognition, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:

This device consists of a cockpit facsimile of the OH-6A (LOH) Helicopter, an instructor station, and an analog computer.

The trainer utilizes dynamically animated and backlighted cross-sectional views of the engine, an analog computer, and facsimiles of the engine instruments and controls to demonstrate engine operation. Engine sounds are realistically simulated for normal and abnormal operation. A trainee's station is provided which is a facsimile of the operational helicopter cockpit. All controls and instruments pertinent to the operation of the engine are functional and operable by the trainee and cause the proper associated responses in the display panel. The device provides for training in various procedures, such as correct engine starting and operation, the effect of various engine and fuel system malfunctions, and the effect of operating parameters (temperature, airspeed, and altitude) on engine performance.

The instructor console contains switches and controls for injecting various inputs and malfunctions in the trainer.

DVC 01-93

The effects resulting from such inputs are evident by visual observation of the engine display panel units. The sound system produces aural effects consistent with the operating condition being simulated.

Physical Information:

OH-6A cockpit station: 80'' x 36'' x 74''
Display panel: 126'' x 36'' x 75''
Computer: 112'' x 35'' x 79''
Instructor console: 41'' x 29'' x 71''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Classroom, 456'' x 420'' x 120'' high, with climatic control that maintains the ambient room temperature at 70°F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

110/220 vac, 60 cycle

Applicable Publications:

NAVTRADEV P-3786, Operation and Maintenance Guide for OH-6A(LOH) /T63-A-5A Multi-Purpose Engine Trainer, Device 2A27B-2

Reference Publications

TM 55-2840-230 Series

Training Requirements Supported:

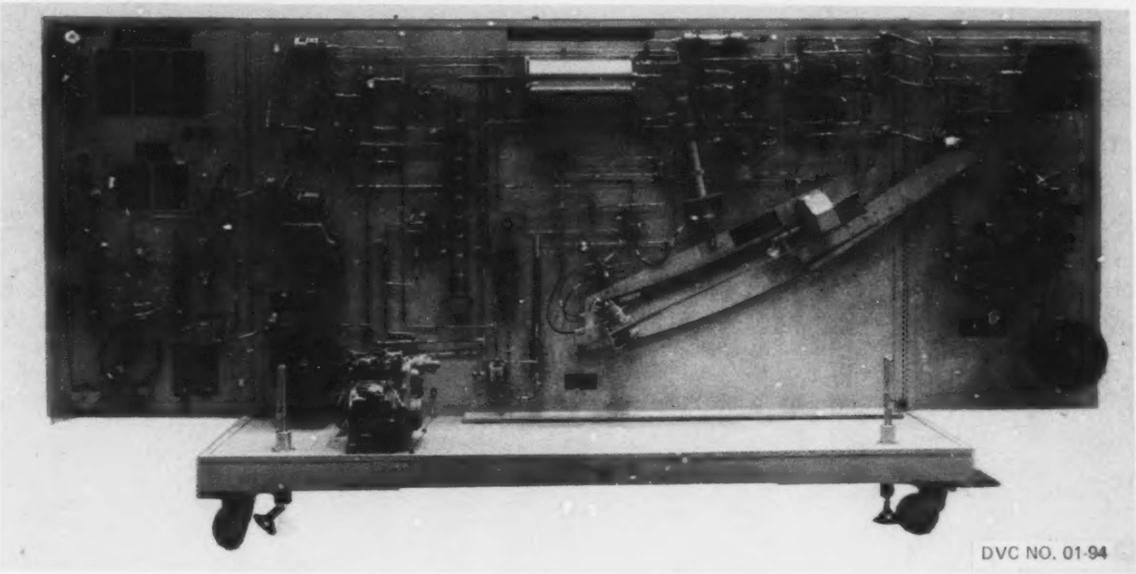
SM 551-68B Tasks

2111	2122	2127	2128

CH-47C UTILITY HYDRAULIC SYSTEMS TRAINER

DVC 01-94

NSN 6930-01-063-7552



DVC NO. 01-94

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use in training of CH-47C Helicopter aviator and maintenance personnel and to provide a realistic environment for demonstrating the utility hydraulic systems of the CH-47C Helicopter. The use of operational hydraulic components in a simulated system provides a comprehensive means of teaching installation, removal, service, adjustment, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is a panel display, upon which are mounted standard operational CH-47C Helicopter hydraulic components. Components are interconnected in the same relative position as on the operational helicopter. The panel is mounted on a metal platform with the base of the platform on casters.

Physical Information:
190'' x 54'' x 84''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
220 vac, single-phase, 60 cycle

DVC 01-94

Applicable Publications:
Commercial Manual

Reference Publications:
TM 55-1520-209 Series

Training Requirements Supported:

ARTEP 55-167 Tasks

E-2	E-13	E-17	E-21
E-3	E-16	E-19	E-24
E-11			

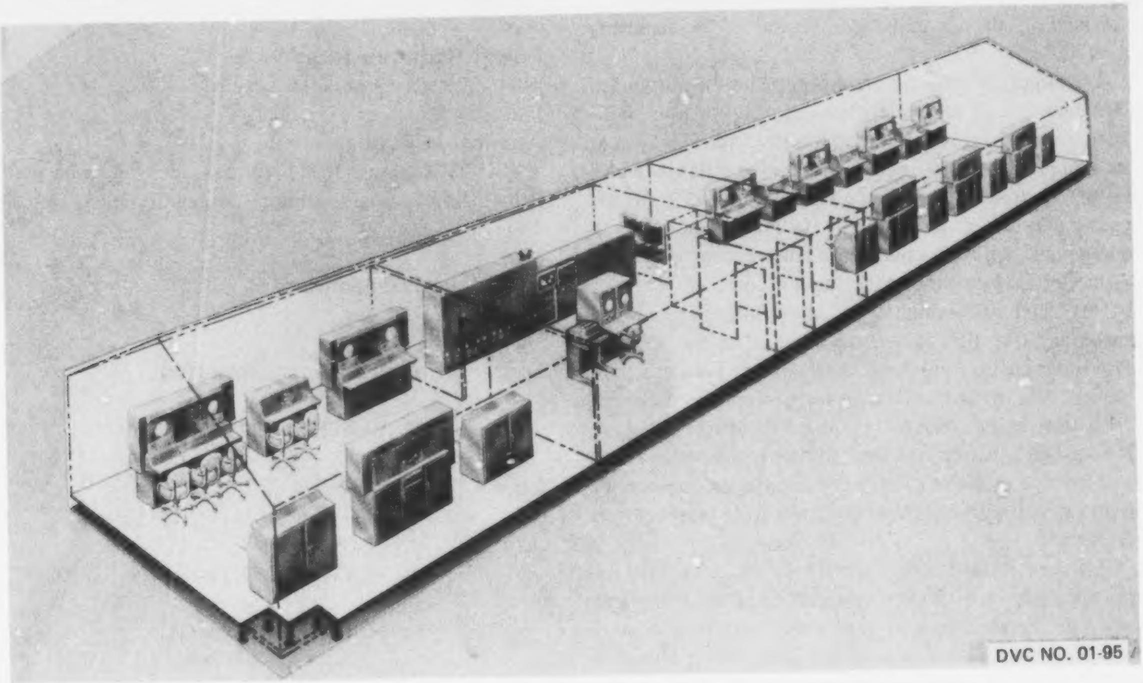
SM 551-67U Tasks

1502	3501	4010	4013
1503	4003	4012	6501

RADAR OPERATOR TRAINING COMPLEX, AIRCRAFT

DVC 01-95
15G16

NSN 6940-01-075-8367



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To provide a realistic environment for student familiarization training and practical application of the techniques and procedures utilized in air traffic control. Formal training is conducted at the US Army Aviation School for personnel who have been selected to become air traffic controllers. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The device is a laboratory complex consisting of 10 "minilabs" operated through a general-purpose computer. Included with the device is an antenna simulation unit and an instructor console. Each minilab has positions for a precision radar approach controller, an area surveillance radar controller, a flight data man, and two target control unit operators. These positions are interconnected by simulated UHF radio, telephone, and intercom facilities. Students man each of these stations in rotation during the course of instruction.

The radar stations are realistic facsimiles of standard tactical AN/TPN-18 radar controller stations. The student controllers occupying these stations perform normal alignment of their radar sets, as necessary, to reduce the effects of ground clutter and weather conditions and to provide proper control of all aircraft (targets) appearing in their sections of responsibility. Control will not be limited to assuring safe passage of an aircraft through the sector but will also provide ground controlled approaches for landing aircraft and radar vectoring for departing aircraft.

The target control units are designed for the purpose of introduction and subsequent control of up to four simulated aircraft targets on the approach controller's radar indicator. Each target is projected on the radar indicator by the computer, which receives instructions from the pseudopilot (target control unit operator), as he reacts in compliance with directions from the student air traffic controller. The position of the target is constantly updated by the computer, which takes into consideration wind speed and direction as well as airspeed of the aircraft. Provisions are incorporated in the device which will enable two or more of the minilabs to work in conjunction with each other in the same fashion that two or more stations in a tactical situation will work together. Such operations will involve sector responsibility and the requirement to transfer control of targets as they pass from one sector to another.

A freeze mode is incorporated in the device which permits instructors to stop any part or all of a problem when giving assistance to individual students. A record and playback feature is also included which allows a more precise critique of student efforts by enabling the instructor to show a rerun of the problem in question. The senior instructor has the capability of coordinating the entire class effort from the instructor console, in addition to monitoring student stations.

Physical Information:

GP computer: 120'' x 37'' x 64''; 3,400 lb
ASU and clutter: 45'' x 31'' x 96''; 1,100 lb
Digital to video cabinet: 22'' x 31'' x 78''; 760 lb
GCA console: 79'' x 31'' x 65''; 880 lb
TCV console: 58'' x 31'' x 52''; 540 lb
Instructor console: 48'' x 31'' x 78''; 730 lb
Line filter: 44'' x 8'' x 41''; 400 lb
Power panel: 40'' x 20'' x 84''; 675 lb

Equipment Required, Not Supplied:

See table 1-2 of NAVTRADEV P-3631.

Special Installation Requirements:

None

Power Requirements:

110/220 vac, 3-phase, 60 cycle

Applicable Publications:

NAVTRADEV P-3631, Maintenance Handbook with Parts Lists for Radar Operator Training Complex, Device 15-G16

Reference Publications:

None

Training Requirements Supported:

ARTEP 1-127 Tasks

3-6
4-3
4-9
5-7
5-22

ARTEP 1-252 Tasks

5-9-3
5-14-3

ARTEP 57-55 Tasks

6-1-B
6-2-E
6-2-F
6-2-G
6-2-H
7-1-D
7-2-E
7-2-F
7-2-G
7-2-H

MOSC 15-3J, 93J, and 103AY

SM 011-93J Tasks

1015
1016
1017
1018
1020
1021
1022
1023
1024
1025
1026
1027
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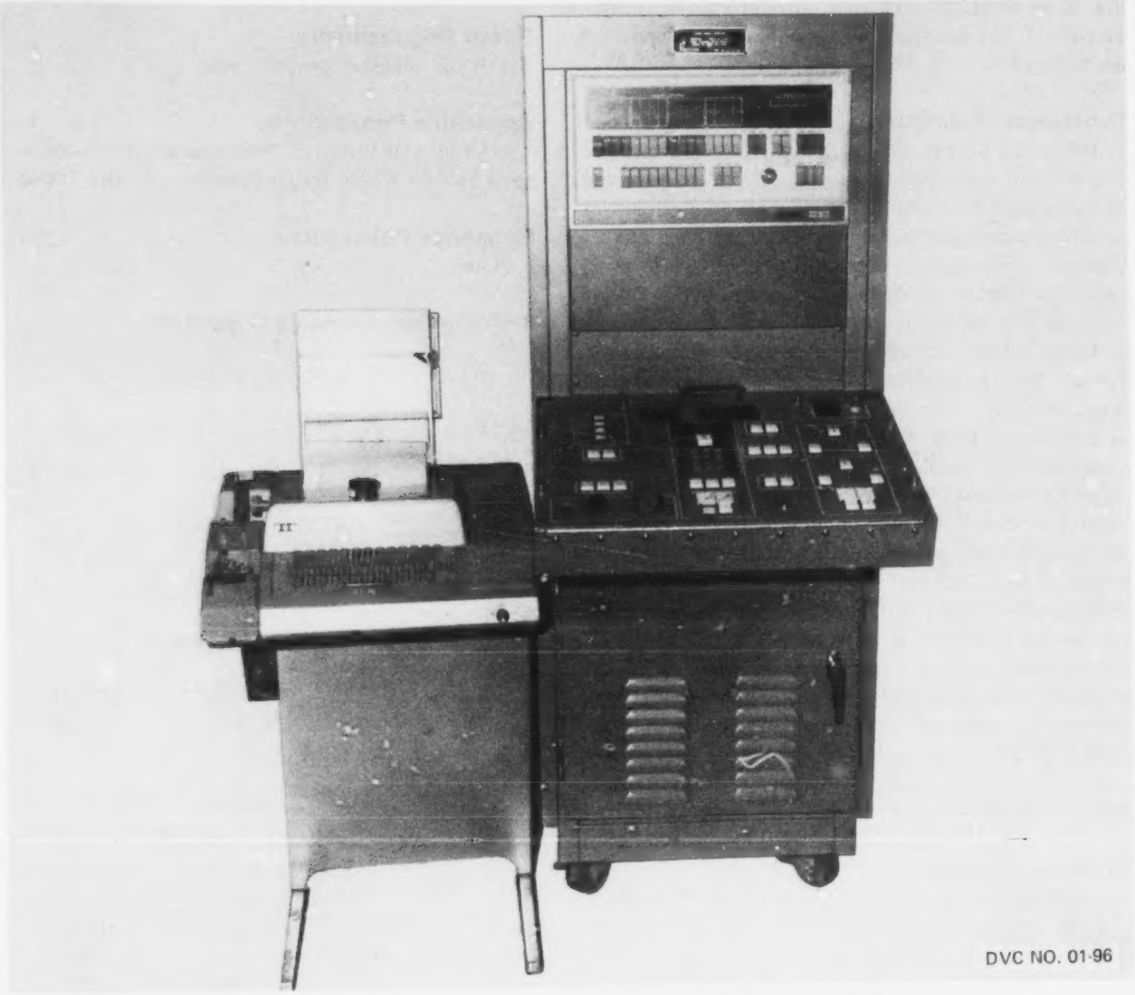
2005
2006

RADAR TARGET SIMULATOR, AIRCRAFT

DVC 01-96
15G16A

NSN 6940-01-075-8368



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

DVC 01-96

Purpose of Trainer:

To provide a realistic environment for student application of the techniques and procedures utilized in air traffic control. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer provides synthetic radar targets which are inserted into operational Radar Set AN/TPN-18 located at operational field sites. A multiapplication computer including a teletypewriter and punched tape unit, a target control console, ground control radar interface junction box, two intercommunication units, and a power line filter make up the trainer. Data entry at the teletypewriter and punched tape unit provides for the programming of specific training problems. Data may be entered only when the trainer is in the initialize mode of operation as selected at the Target Control Unit Console. The Target Control Unit Console trainer control panel accommodates a surveillance operator (pseudopilot) and provides control functions for two aircaft. Pushbutton switches are provided for entering initial conditions and flight control orders. Readout displays of aircraft status are also provided. The panel is divided into two sections: one for the control of aircraft in the surveillance mode (two aircraft) and the other for the precision approach mode (one selected aircraft). An intercommunication control panel is provided for simulated radio communications with the GCA station. In addition, trainer power control and problem controls for initialize, run, and freeze mode of operation are included:

Physical Information:

Target control unit console: 25" x 45" x 65"; 600 lb
Radar interface junction box: 12" x 6" x 15"; 20 lb
Teletypewriter and punched tape: 21" x 82" x 32"; 80 lb
Intercommunication unit: 7" x 8" x 8"; 10 lb EMI filter: 10" x 6" x 35"; 60 lb

Equipment Required, Not Supplied:

See table 1-2 of NAVTRADEV P-3632.

Special Installation Requirements:

None

Power Requirements:

110 vac, single-phase, 60 cycle

Applicable Publications:

NAVTRADEV P-3632, Maintenance Handbook with Parts List for Radar Target Simulator, Device 15G16A

Reference Publications:

None

Training Requirements Supported:

ARTEP 1-127 Tasks

3-6
4-3
4-9
5-7
5-22

ARTEP 1-252 Tasks

5-9-3
5-14-3

ARTEP 57-55 Tasks

6-1-B
6-2-E
6-2-F
6-2-G
6-2-H
7-1-D
7-2-E
7-2-F
7-2-G
7-2-H

MOSC 15-3J, 93J, and 103AY

SM 011-93J Tasks

1020
1021
1022
1023
1024
1025
1026
1027
1028
1029
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2001
2002
2003
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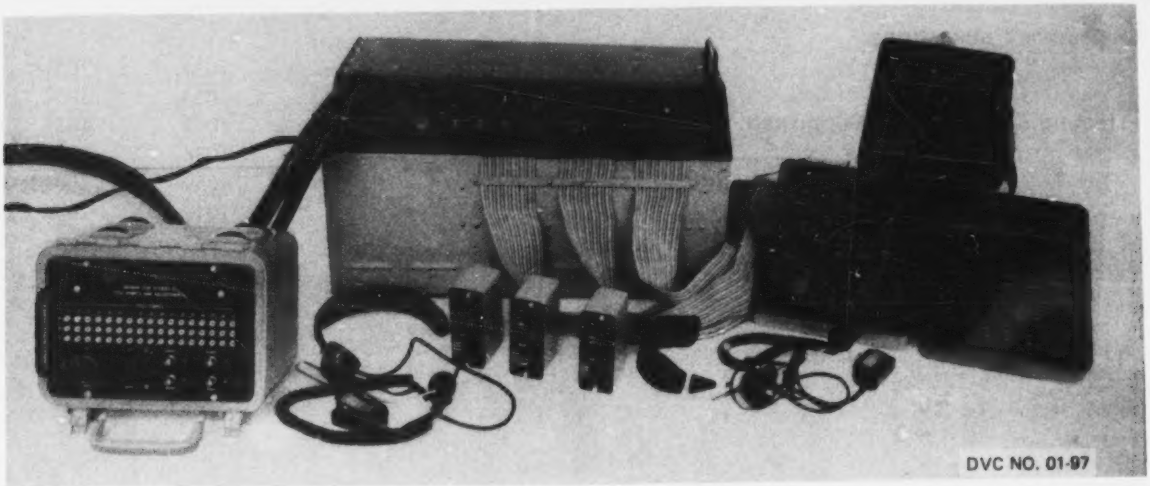
2005
2006

MOVING RADAR TARGET GENERATOR

DVC 01-97
15G14A

NSN 5840-00-138-9974



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

CECOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is the means to provide realistic training for air traffic controllers on site at operational airfields. Air traffic controllers maintain their proficiency in the techniques and procedures of air traffic control. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a master control box, a trainee station, three target control units, and a junction box. A realistic communication system is included in the trainer which enables radio communications between the radar station and each target control unit operator.

The trainer provides realistic synthetic radar targets which are inserted into operational Radar Sets AN/TPN-18 and AN/FPN-40. These targets can be inserted without interfering with the normal operation of the radar.

Four cases are provided for moving or storing the device.

Physical Information:

Control module: 25" x 15" x 13"; 60 lb
Target control module: 10" x 12" x 5"; 5 lb
Junction box: 11" x 8" x 10"; 7 lb
Transit case no. 1: 34" x 22" x 19"; 120 lb
Transit case no. 2: 34" x 22" x 10"; 100 lb
Transit case no. 3: 10" x 22" x 14"; 40 lb
Transit case no. 4: 10" x 22" x 14"; 65 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Radar control site at an operational airfield

Power Requirements:

110 vac, 50/60/400 cycles

DVC 01-97

Applicable Publications:

None

Reference Publications:

None

Training Requirements Supported:

ARTEP 1-252 Tasks

5-9-3
5-14-3

ARTEP 57-55 Tasks

6-1-B
6-2-E
6-2-F
6-2-G
6-2-H
7-1-D
7-2-E
7-2-F
7-2-G
7-2-H

MOSC 15-3J, 93J, and 103AY

SM 011-93J Tasks

1015
1016
1017
1018
1020
1021
1022
1023
1024
1025
1026
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1028
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1051
1052
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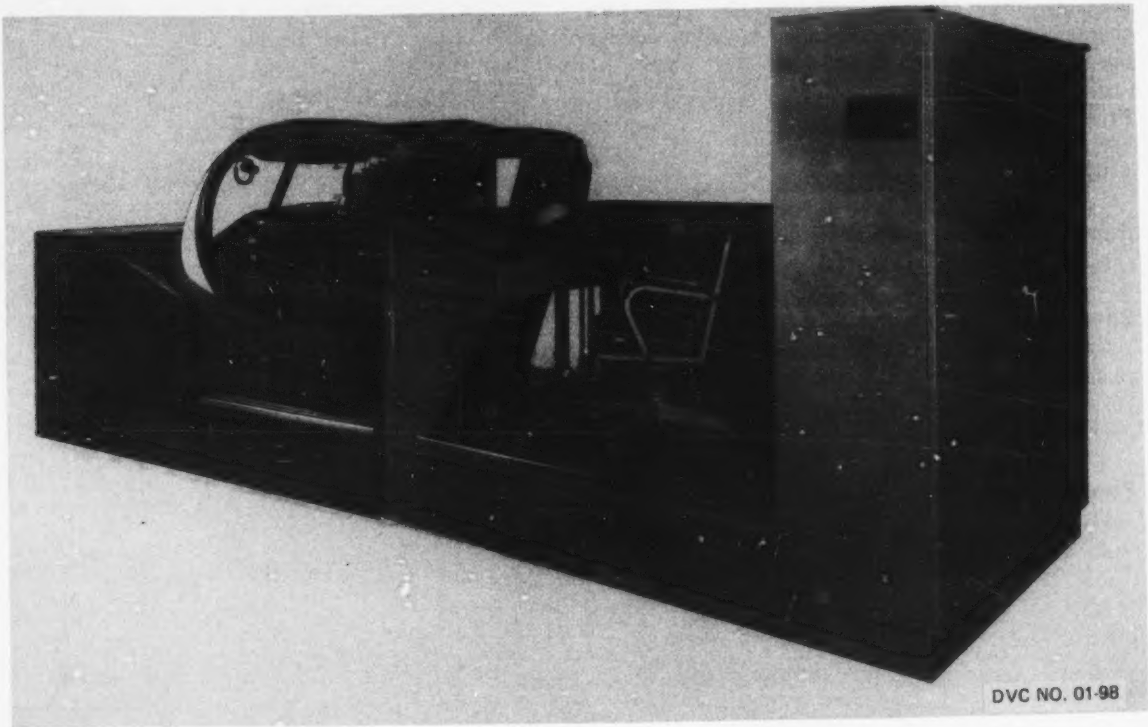
1054
2001
2002
2004
2005
2006

OV-1C COCKPIT PROCEDURES TRAINER

DVC 01-98
2C9A

NSN 6910-01-063-7566



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer provides a realistic environment for training aviator personnel in normal cockpit and communications procedures to operate the OV-1C Aircraft, and to train them to recognize, analyze, and react correctly to emergency conditions. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a student station which is a full-scale reproduction of the OV-1C cockpit, an instructor station, and an analog computer. All controls, indicators, etc., pertinent to the practice of the required procedures are either actual aircraft components or operable facsimiles of the OV-1C cockpit. In order to impart the illusion of realism, the control, feel, and sound systems, which are controlled by the computer, provide the aural and physical cues associated with engine operation and flight conditions. The aviator's seat is a modified deactivated MK-J5 Ejection Seat. The instructor observes and monitors all student operations through an observation window located in the bulkhead separating the cockpit and the instructor area. Telltale lights, switches, and adjustment control knobs located on the instructor console provide the instructor with a means of monitoring and controlling all student operations and procedures. Malfunctions may be introduced either by activation of the instructor's override and malfunction controls, or by the student's failure to follow correct operational procedures.

Physical Information:

Cockpit assembly: 104'' x 70'' x 80''
Instructor console: 90'' x 64'' x 80''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Classroom, 360'' x 240'' x 120'' high, with climatic control that maintains the ambient room temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

110 vac, 60 cycles

Applicable Publications:

NAVTRADEV P-3787, Operation and Maintenance Guide with Parts List for OV-1C Mohawk Aircraft Cockpit Procedures Trainer, Device 2C9A.

Reference Publications:

TM 55-1510-204 Series

Training Requirements Supported:

MOSC 15-2K and 100R

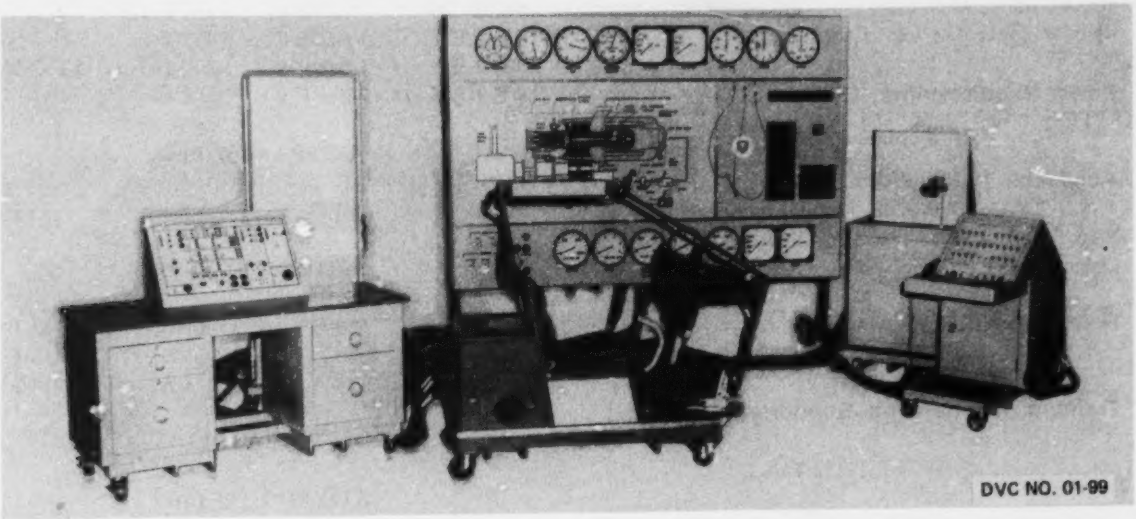
ATM TC 1-144 Tasks

1502	4002	4005	4008
1504	4003	4006	4507
3009	4004	4007	6501
4001			

OH-58A/T63-A-700 ENGINE TRAINER

DVC 01-99
2A27E

NSN 6930-01-064-2777



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is for classroom use to dynamically demonstrate the internal functioning of the T63-A-700 Engine and the changes in engine performance caused by various system malfunctions or by external operating parameters such as altitude and temperature. The trainer provides basic and refresher training for aviator and maintenance personnel in cockpit procedures and systems management techniques, required to operate the OH-58A Aircraft, and to teach maintenance personnel malfunction recognition and troubleshooting procedures. The specific trainer requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a facsimile of the OH-58A Aircraft cockpit. The cockpit instruments, indicators, and controls simulate, under analog computer control, actual aircraft operations. A training problem can be established from an instructor console. Student actions and responses to problem conditions cause associated responses on cockpit instruments, simulating actual equipment responses under the same conditions. Facilities for monitoring the students are provided by indicators and displays on the engine display panel.

Physical Information:
Student station: 36" x 73" x 63"; 400 lb
Computer cabinet: 49" x 30" x 78"; 600 lb
Instructor console: 24" x 41" x 48"; 200 lb
Engine display panel: 108" x 34" x 81"; 450 lb
Utility cabinet: 60" x 27" x 52"; 300 lb
Fuel control station: 32" x 30" x 36"; 200 lb

Equipment Required, Not Supplied:
None

DVC 01-99

Special Installation Requirements:

Climatically controlled classroom that maintains the ambient room temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

110/220 vac, single-phase, 60 cycle

Applicable Publications:

NAVTRADEV P-3790, Maintenance Handbook with Parts List for OH-58A/T63-700 Power Plant Simulator, Device 2A27E

Reference Publications:

TM 55-2840-230 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-5-4
5-8-3
5-13-8

ARTEP 17-205 Tasks

2-7-1
2-7-2
2-7-3
2-7-4

ARTEP 17-385 Tasks

2-7-1
2-7-2
2-7-3

ARTEP 55-89 Tasks

5-C-2-C-5
5-E-2-E-2
5-E-2-E-3
5-E-2-E-4
5-E-2-E-6
5-E-2-E-7
5-E-2-E-8
5-E-2-E-9
5-F-2-F-1
5-F-2-F-2
5-F-2-F-3
5-F-2-F-8
5-H-2-H-4
5-L-2-L-1

ARTEP 55-167 Tasks

5-E-2
5-E-3
5-E-4
5-E-5

ARTEP 57-55 Tasks

5-8-A
5-8-D
5-10-A
5-10-D
7-8-G
7-11-A
7-11-B
7-11-E
7-13-A
7-13-B
7-13-E
7-14-I

MOSC 15A-1D, 67V, and 100G

ATM TC 1-137 Tasks

1501
1502
1503
1504
4007
4008
4009
6501
6502

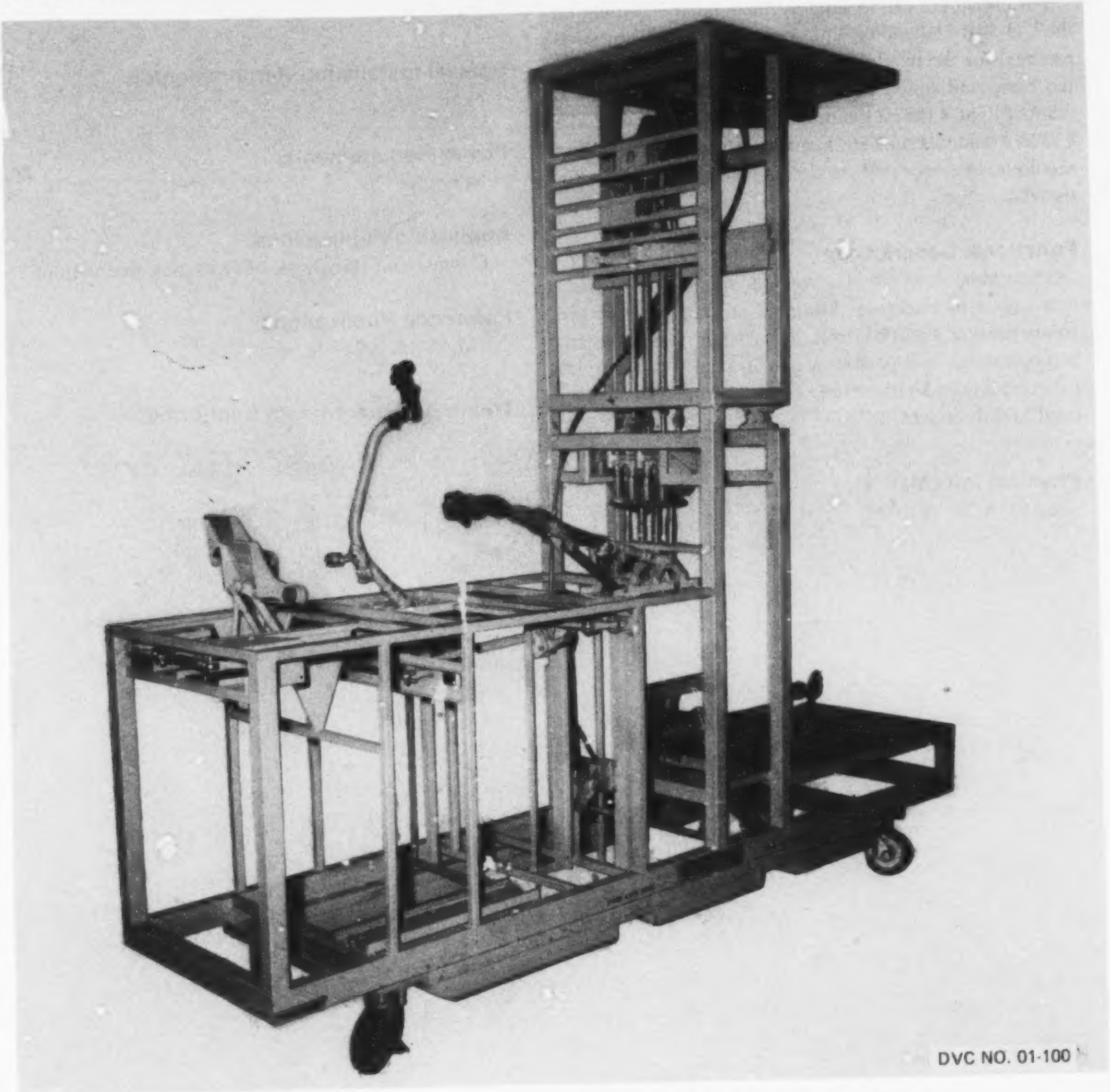
SM 055-67V

1711
1712
1713
1714
1715
1716
1717
1718
1719
1720
1721
1722
1723
1724
1725
1726
2120
2257
3139

TRAINER, AIRCRAFT, FLIGHT CONTROLS COLLECTIVE BIAS: CH-54B

DVC 01-100

NSN 6910-00-198-8532



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

DVC 01-100

Purpose of Trainer:

For classroom use to support maintenance training on the CH-54B Helicopter, and to provide a realistic environment for the instruction of maintenance personnel in the basic and functional difference between the Automatic Flight Control Stabilizer Servo Systems of the CH-54A and CH-54B Helicopters. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a welded, square steel structure with a mobile base. Mounted on this structure are components of flight controls. The trainer is so designed, and operational components are so arranged, that individual controls can be observed. The trainer has been shortened to reduce size.

Physical Information:

120 '' x 30'' x 108''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

Commercial Handbook of Operating Instructions

Reference Publications:

TM 55-1520-217 Series

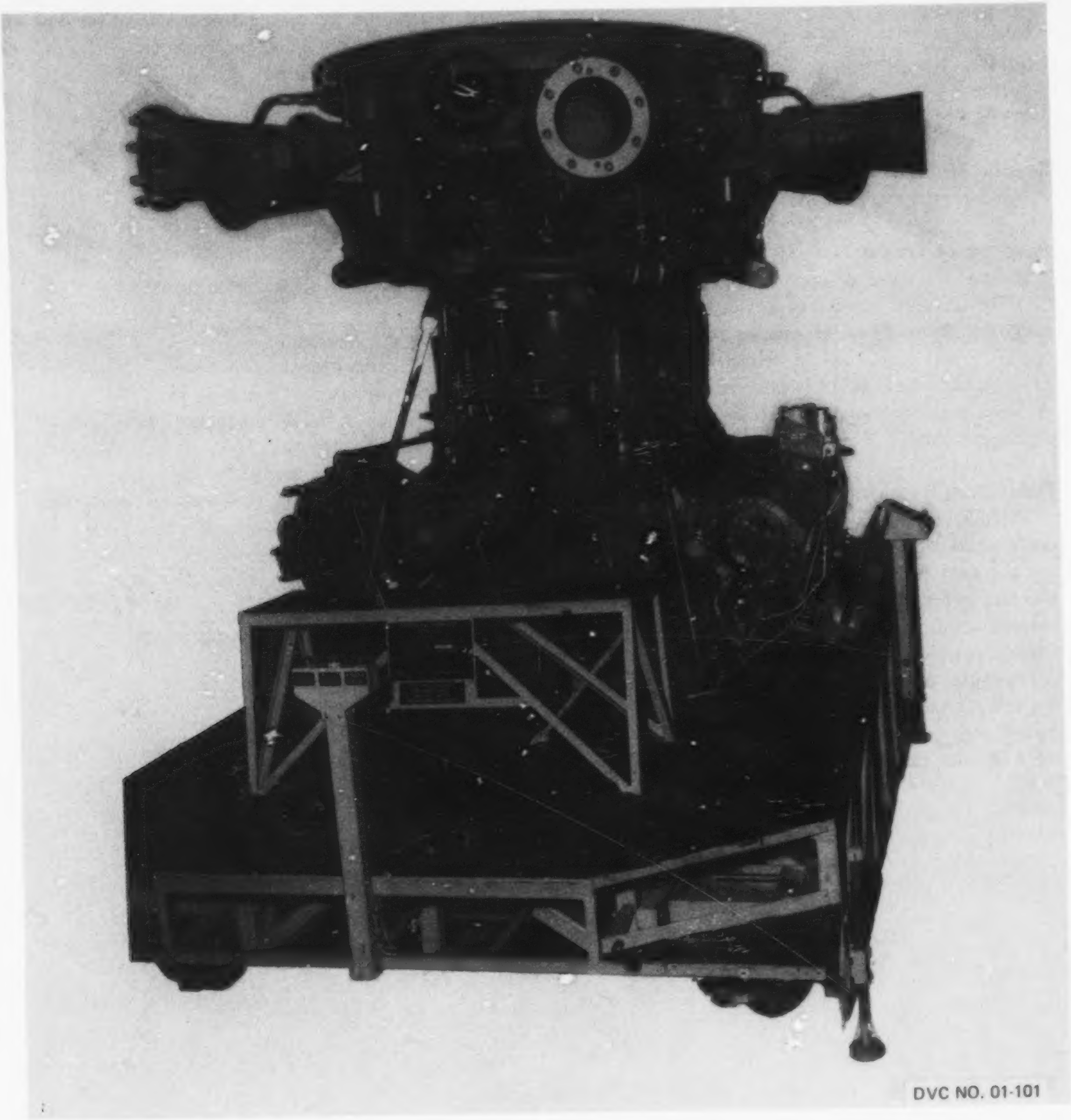
Training Requirements Supported:

SM 551-67X Tasks

2323 2332 2340 2358

TRAINER, AIRCRAFT TRANSMISSION ROTOR HEAD: CH-54B

DVC 01-101 **NSN 6910-00-198-8534**



DVC NO. 01-101

DVC 01-101

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to support maintenance training on the CH-54B Helicopter and to provide a realistic environment for an instructor to demonstrate installation, removal, operation, servicing, and adjustment of the Transmission Rotor Head on the CH-54B Helicopter. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer consists of the Transmission Rotor Head components of the operational helicopter mounted on a welded steel base with casters. The components are mounted in actual aircraft arrangement so that each individual motion can be observed. All items requiring adjustment are included.

Provisions are made to operate the first and second stage flight control servo. The Electrical and Hydraulic Systems are powered by the electrical power console and the hydraulic cart provided with the CH-54A Aircraft Systems Trainer, DVC 01-57. Two instructor's panels are mounted on the rear and right side of the base and one emergency-stop panel on the front.

Physical Information:
80'' x 132'' x 108''

Equipment Required, Not Supplied:
Hydraulic cart
Electrical power console

Special Installation Requirements:
None

Power Requirements:
220 vac, 3-phase, 60 cycle, 50 kva
110 vac, single-phase, 60 cycle, 7 kva

Applicable Publications:
Commercial Handbook of Operating Instructions

Reference Publications:
TM 55-1520-217 Series

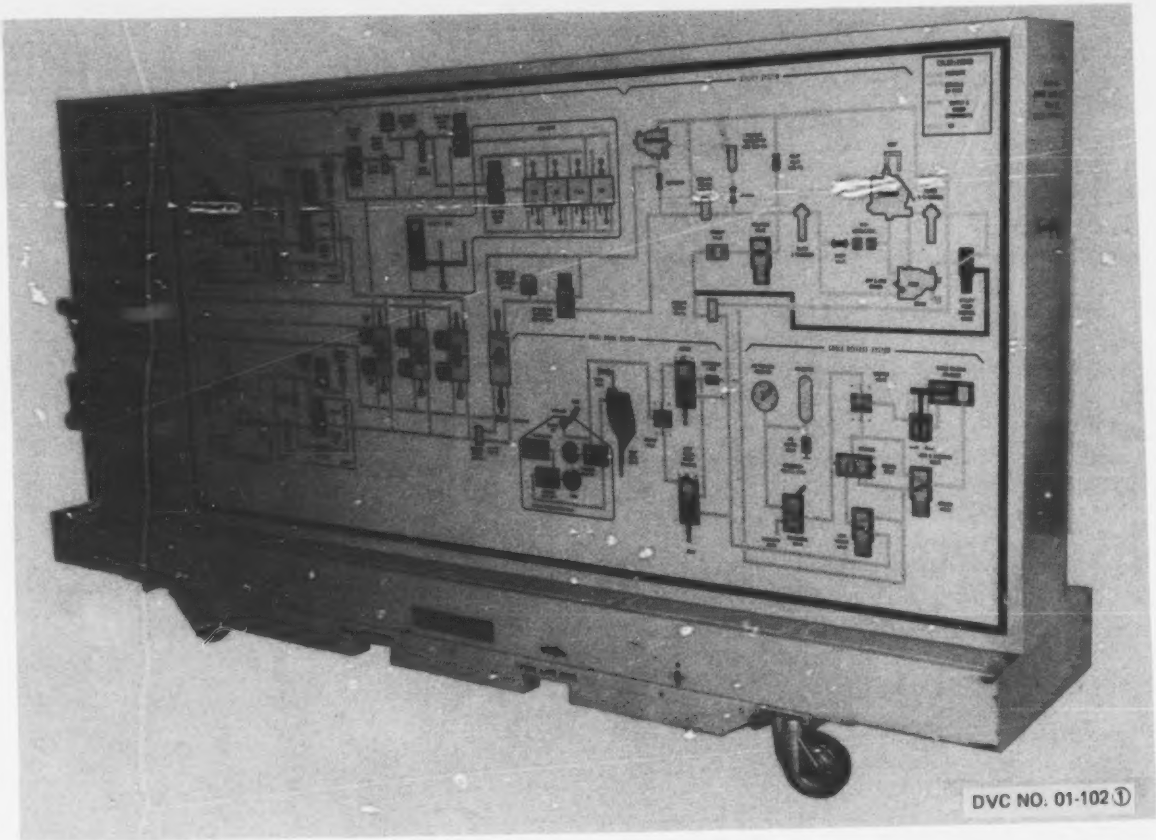
Training Requirements Supported:

SM 551-67X Tasks

2390	2400	2401	2427
2395			

TRAINER, AIRCRAFT, HYDRAULIC SYSTEM: CH-54B

DVC 01-102 NSN 6910-00-198-8533



DVC NO. 01-102①

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
AVSCOM

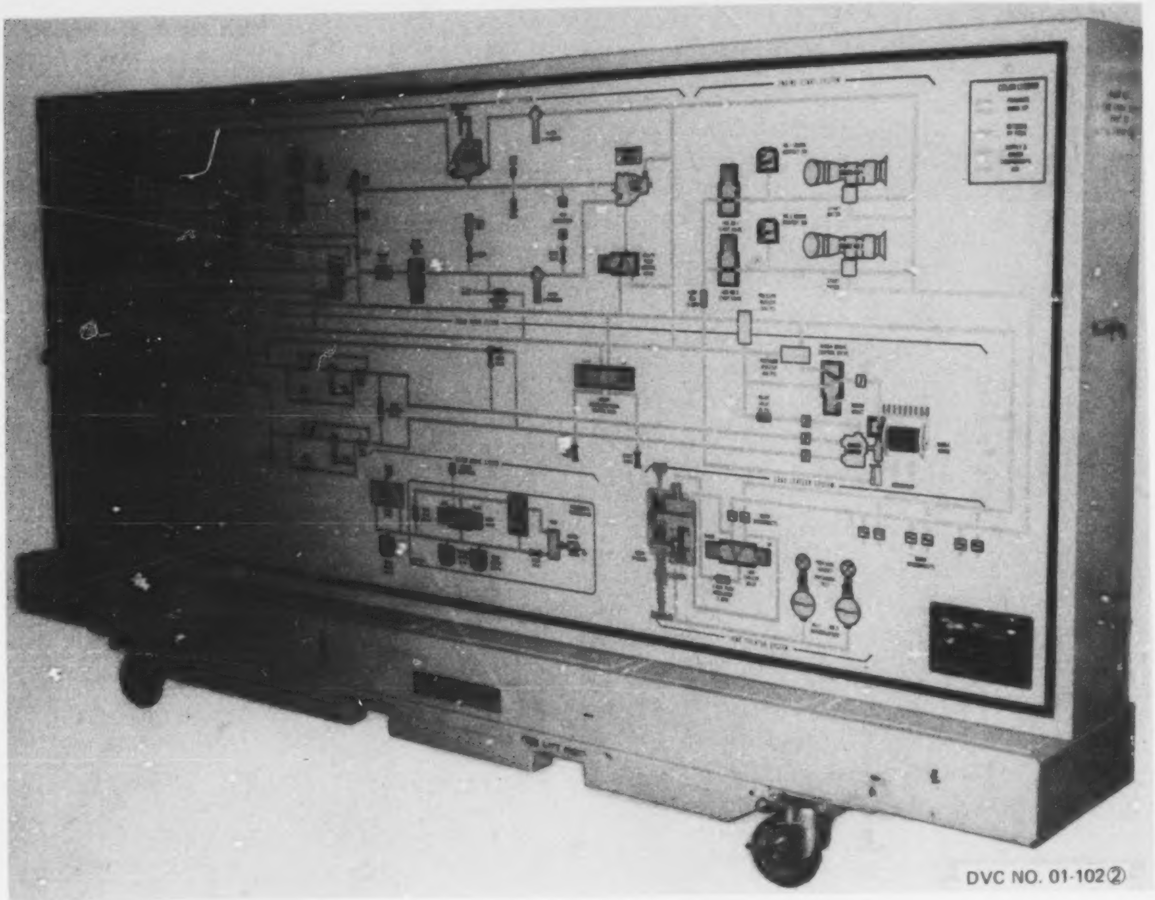
Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to support maintenance training on the CH-54B Helicopter, and to provide a realistic environment for an instructor to familiarize maintenance personnel in the operation of the CH-54B Hydraulic System.

The specific training requirements supported are shown following the descriptive data.

Functional Description:
The device consists of two individual mobile panel units with base assembly and upright display panels which graphically depict the sequence of operation of the CH-54B flight control, first and second stage hydraulic system, and the hoist hydraulic system. Actual aircraft controls are mounted on the panel to the left of a backlighted schematic representation of the Hydraulic System. Aviation of the controls creates an illuminated path depicting the resultant sequence of events occurring in the system.

DVC 01-102



DVC NO. 01-102②

Physical Information:

Display panel—flight control: 136" x 30" x 72"
Display panel—hoist: 136" x 30" x 72"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, single-phase, 60 cycle

Applicable Publications:

Commercial Handbook of Operating Instructions

Reference Publications:

TM 55-1520-217 Series

Training Requirements Supported:

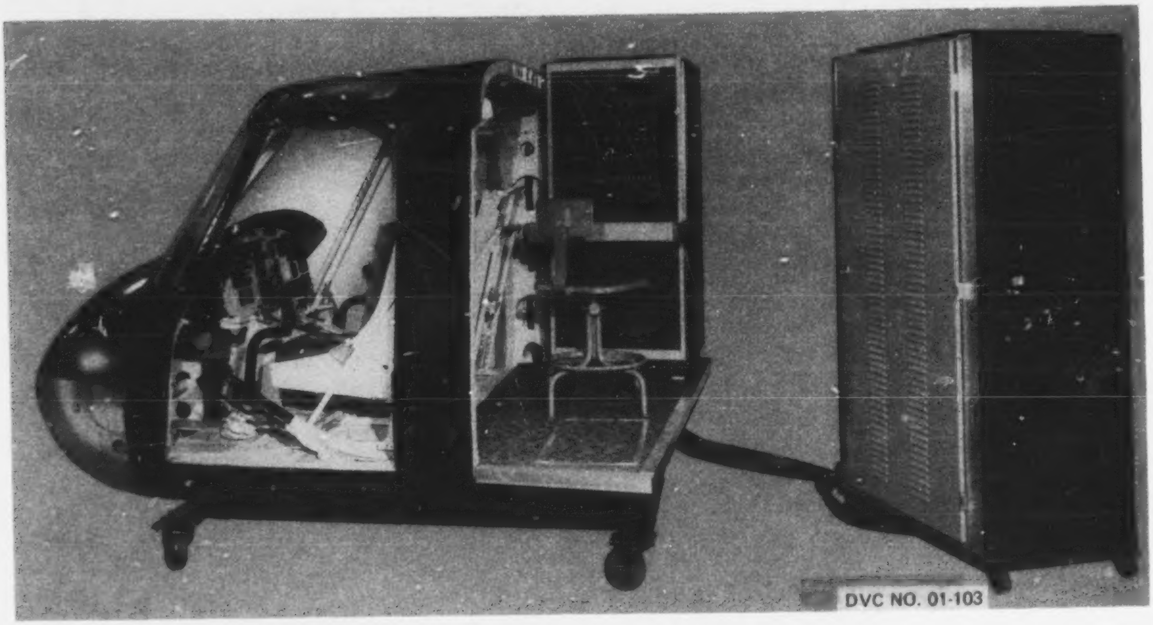
SM 551-67x Tasks

2005 2337 2338 2340

UH-1D/H HELICOPTER COCKPIT PROCEDURES TRAINER

DVC 01-103 **NSN 6910-01-063-7557**
2C35

DVC 01-103A **NSN Pending**



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use of familiarize aviation trainees with the UH-1D/H Helicopter cockpit and controls, and to give the trainees realistic practice in performing ground check-outs (preflight, postflight, and normal emergency shutdown). The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a student station, which is a full-scale reproduction of the UH-1D/H cockpit, instructor station, and the analog computer. All controls, indicators, etc., pertinent to the practice of the required procedures are either actual aircraft components or operable facsimiles of the helicopter equipment. The illusion of realism is imparted through control feel and sound systems, controlled by the computer, which provide the physical and aural cues associated with engine operation and flight conditions. Malfunctions may be introduced by the instructor, through his controls, or by the student's failure to follow correct operational procedures.

Physical Information:
Cockpit assembly: 106" x 92" x 78"; 950 lb
Computer: 27" x 41" x 80"; 650 lb

DVC 01-103

Equipment Required, Not Supplied:

None

Special Installation Requirements:

A climatically controlled classroom that maintains the ambient room temperature at 70°F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

110 vac, 60 cycle

Applicable Publications:

NAVTRADEV P-3872, Operations and Maintenance Guide with Parts List for Device 2C35

Reference Publications:

TM 55-1520-210 Series

Training Requirements Supported:

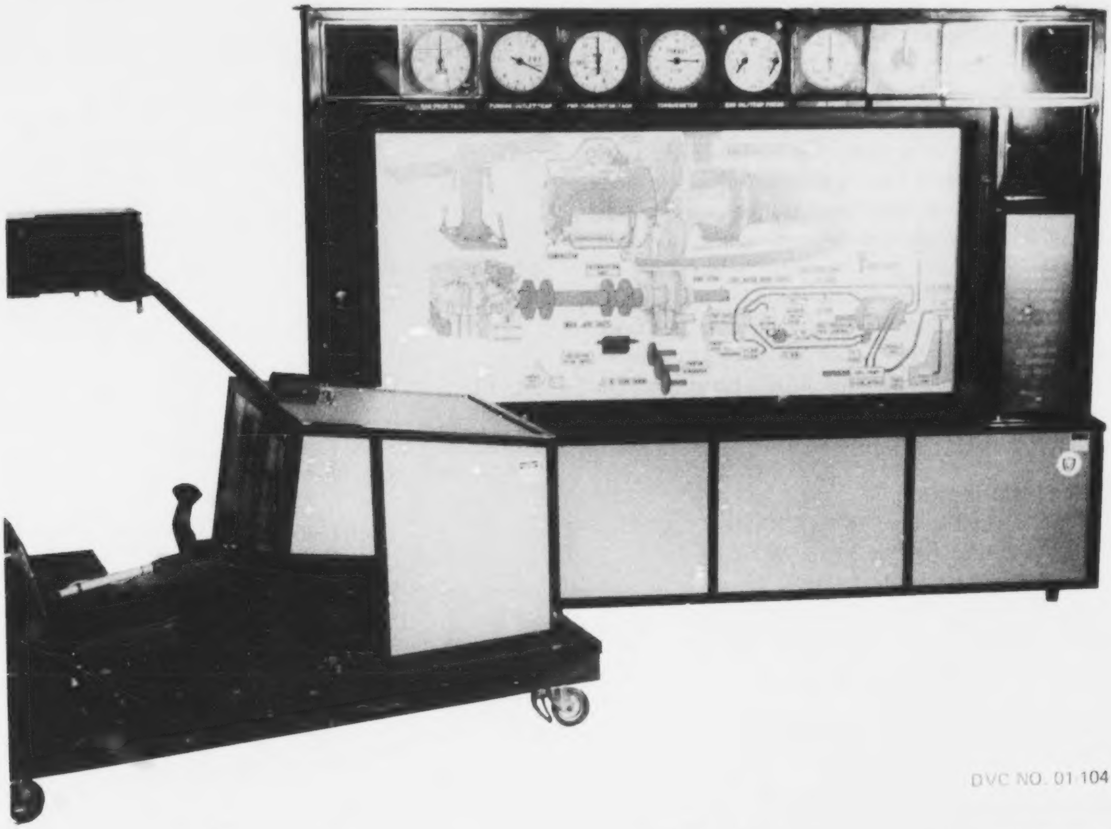
MOSC 15-1E and 100B

ATM TC 1-135 Tasks

1502	1504	4007	6501
1503	4005	4010	

OH-58C ENGINE TRAINER

DVC 01-104 NSN 6930-01-063-7553



DVC NO. 01-104

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to dynamically demonstrate the internal functioning of the T63-A-720 Engine and the changes in engine performance caused by various engine or systems malfunctions, improper operating procedures, or by external parameters such as altitude and temperature. The trainer provides aviator and maintenance personnel with basic and refresher training in proper starting, operating procedures, malfunction recognition, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:

This device consists of a cockpit facsimile of the OH-58C Helicopter, an instructor station, and an analog computer.

The trainer utilizes dynamically animated and backlighted cross-sectional views of the engine, an analog computer, and facsimiles of the engine operation. Engine sounds are realistically simulated for normal and abnormal operation. A trainee's station is provided which is a facsimile of the operational helicopter cockpit. All controls and instruments pertinent to the operation of the engine are functional and operable by the trainer and cause the proper associated responses in the display panel. The device provides for training in various procedures, such as correct engine starting and operation, the effect of various engine and fuel system malfunctions, and the effect of operating parameters (temperature, airspeed, and altitude) on engine performance.

The instructor console contains switches and controls for injecting various inputs and malfunctions in the trainer. The effects resulting from such inputs are evident by visual observation of the engine display panel unit. The sound system produces aural effects consistent with the operating condition being simulated.

Physical Information:

OH-58C cockpit station: 36" x 73" x 63"
Computer cabinet: 49" x 30" x 78"
Utility cabinet: 60" x 27" x 52"
Instructor console: 29" x 22" x 60"
Engine display panel: 108" x 34" x 81"
Fuel control station: 32" x 30" x 36"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Classroom, 456" x 420" x 120" high, with climatic control that maintains the ambient room temperature at 70°F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

110/220 vac, 60 cycle

Applicable Publications:

NAVTRADEV P-4555, Operation and Maintenance Guide for OH-58C/T63-A-720 Multi-Purpose Engine Trainer

Reference Publications:

TM 55-1520-235 Series

Training Requirements Supported:

ARTEP 17-205 Tasks

2-7-1
2-7-2
2-7-3
2-7-4

ARTEP 17-385 Tasks

2-7-1
2-7-2
2-7-3

ARTEP 55-89 Tasks

5-C-2-C-5
5-E-2-E-2
5-E-2-E-3
5-E-2-E-4
5-E-2-E-6
5-E-2-E-7
5-E-2-E-8
5-E-2-E-9
5-F-2-F-1
5-F-2-F-2
5-F-2-F-3
5-F-2-F-8
5-F-2-H-4
5-L-2-L-1

ARTEP 57-55 Tasks

5-8-A
5-8-D
5-10-A
5-10-D
7-8-G
7-11-A
7-11-B
7-11-E
7-13-A
7-13-B
7-13-E
7-14-I

MOSC 15-1D, 67V, and 100G

ATM Tasks

1501
1502
1503
1504
4007
4008
4009
6501
6502

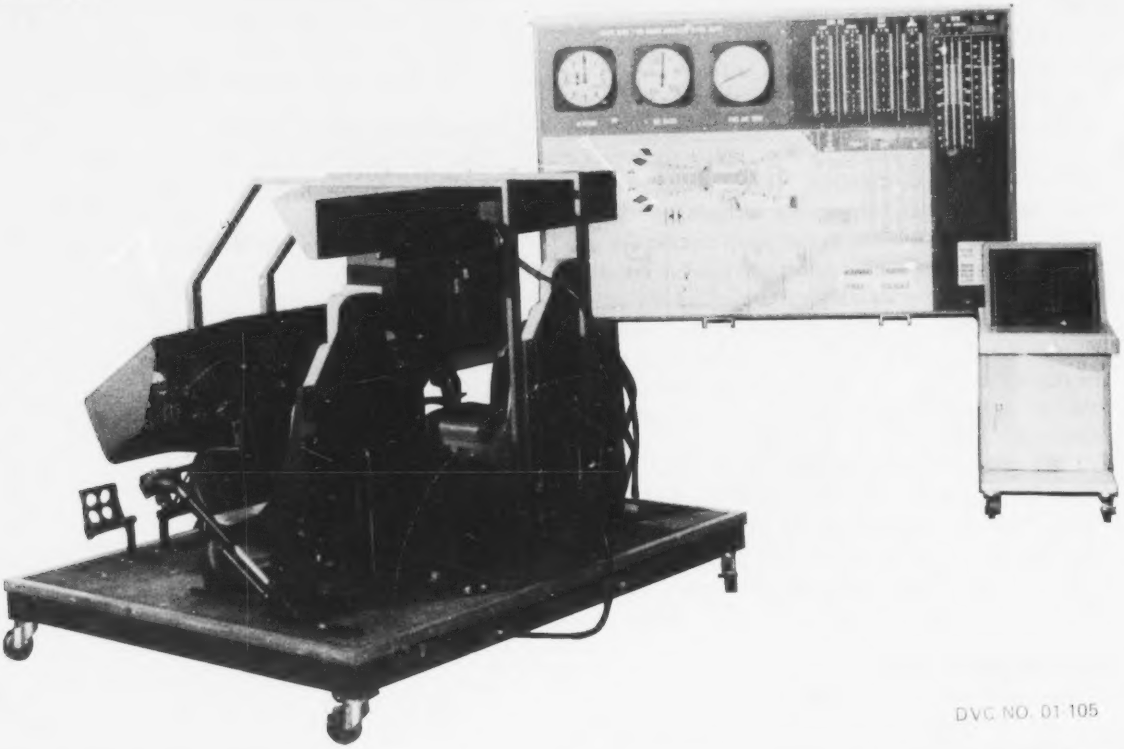
SM 055-67V Tasks

1711
1712
1713
1714
1715
1716
1717
1718
1719
1720
1721
1722
1723
1724
1725
1726
2120
2257
3139

BLACK HAWK T-700 ENGINE TRAINER

DVC 01-105

NSN 6910-01-080-2053



DVC NO. 01-105

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The trainer provides aviator and maintenance personnel with basic and refresher training in proper starting, operating procedures, malfunction recognition, and troubleshooting procedures. It dynamically demonstrates the internal functioning of the T-700 Engine and the changes in engine performance caused by various engine or systems malfunctions, improper operating procedures, or by external parameters such as altitude and temperature. The specific training requirements supported are shown following the descriptive data.

Functional Description:

This training device consists of the following major components: a dynamically animated and backlighted cross-section of the T-700 Engine mounted on a vertical panel board. The panel board includes an enlarged duplication of the BLACK HAWK Master Caution System Display Panel and an enlarged depiction of the following engine instruments:

a. RPM (rotor)—each engine
b. N1—each engine

c. N2—each engine
d. Torque meter—each engine
e. Engine oil pressure—each engine
f. Engine oil temperature—each engine
g. Turbine inlet temperature—each engine

The engine display is appropriately labeled to identify major components of the engine, i.e., output shaft, power shaft, compressor, combustion, N1, N2, etc. Flow areas including the air inlet, compression sections, combustion chambers, turbine section, and exhaust section are presented on the panel and appropriately color coded to indicate functions. A lighting system in the rear of the panel is sequenced by the trainer computer so that illumination and animation appear as an accurate depiction of the engine operation. The lighting is sequenced to indicate fuel and air flow and depicts pressure temperature changes by the intensity of the lighting.

The instructor console contains switches and controls for injecting various malfunctions into the trainer. The effects resulting from such inputs are evident by visual observations of the Engine Display Panel Units. The sound system produces aural effects consistent with the malfunctions being simulated.

Physical Information:

Panel: 60'' x 96'' x 18''; 800 lb
Instructor console: 43'' x 22'' x 20''; 125 lb
Cockpit: 65'' x 70'' x 88''; 650 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Classroom, 456'' x 420'' x 120'' high, with climatic control that maintains the ambient room temperature at 70°F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

110 vac, 60 cycle

Applicable Publications:

NAV P-4423, Parts Catalog
NAV P-4422, PMS Cards
NAV P-4421, Maintenance/Operations

Reference Publications:

TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-8-3
5-11-4
5-11-5
5-11-6
5-12-3

ARTEP 17-205 Tasks

1-10-2
2-5-1
2-7-1
2-7-2
2-7-3

ARTEP 17-385 Tasks

2-7-1
2-7-2
2-7-3

ARTEP 57-55 Tasks

5-8-A
5-10-A
6-1-D
7-1-B
7-1-D
7-3-C
7-8-A
7-11-A
7-11-G
7-13-A
7-14-I

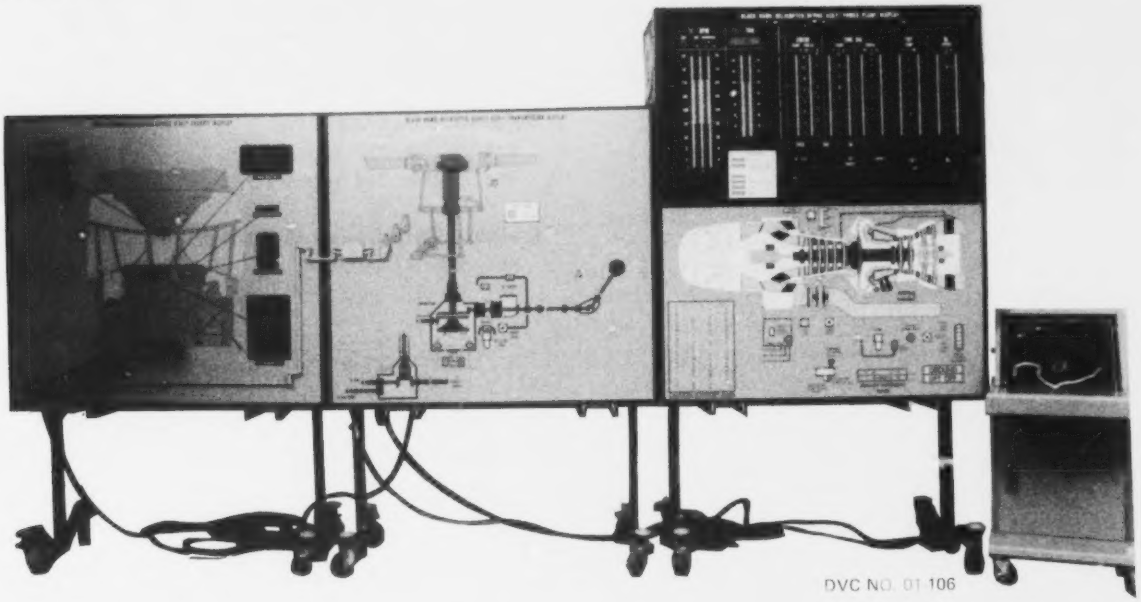
MOSC 15-1N and 100

ATM Tasks

1501
1502
1503
3002
4007
4008
4009
4010
6501

BLACK HAWK POWER PLANT/POWER DRIVE TRAINER

DVC 01-106 **NSN 6930-01-080-2052**



DVC NO. 01-106

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use to provide a realistic environment for familiarization of maintenance personnel with theory of operation of the T-700 Engine and its power drive systems. The specific training requirements supported are shown following the descriptive data.

Functional Description:
This trainer is designed, using computerized backlighting technology, to create the illusion of transitional "lift off." The trainer simultaneously displays the loading effects on the engine instrumentation, showing the compressor and N1 rotating in a clockwise direction and the N2 turbine wheels and shaft rotating in counterclockwise direction at one-third visual speed of the N1. In addition, the gears rotate, air flow and exhaust are shown, as well as foreign object damage effects on engine performance and governor operations. Transmission operation shows gears turning, oil pressure and oil temperature readings, and rotor blades revolving at various speeds. All features operate individually or automatically in unison, controlled electronically by throttle rotation or by movement of the collective pitch. An instructor's switch panel is located on the trainer to permit the instructor to select flow lighting and/or steady lights for compressor N1 turbine wheels and shafts, N2 turbine wheels and shafts, inlet air prior to combustion, start fuel, main fuel, anti-ice and ignitor. This panel trainer base is mounted on a steel channel frame with full swivel rubber tired self-locking casters. The noise level while in operation will be within acceptable OSHA limits.

Physical Information:
Panel: 180" x 60" x 18"; 1,150 lbs
Instructor panel: 43" x 21" x 41"; 125 lb

DVC 01-106

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac, 60 cycle

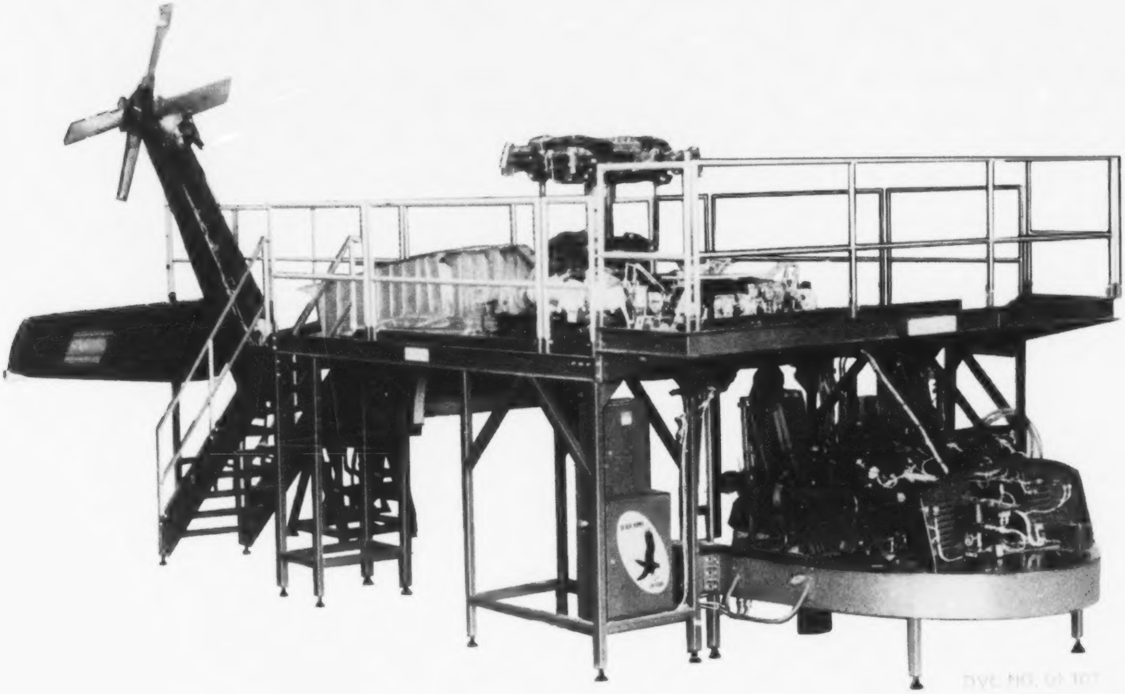
Applicable Publications:
NAV P-4424 Maintenance/Operator
NAV P-4425 PMS Cards
NAV P-4426 Parts Manual

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:
Supports 67T 10-, 20-, and 30-level courses.

BLACK HAWK COMPOSITE TRAINER

DVC 01-107 **NSN 6930-01-080-2054**



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer provides a realistic environment for an instructor to demonstrate installation, removal, operation, servicing, and adjustment of electrical, hydraulic, engine, and flight control systems and components on the UH-60 BLACK HAWK Aircraft. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is constructed of welded tubular steel and steel channel frames for support, utilizing actual aircraft components. It contains a cutaway main and tail rotor transmission, main rotor hub and stubbed blades, shortened power train, and flight controls with a self-contained hydraulic system. The trainer has an external power source of 110 volts ac for operation. Noise level while in operation is within acceptable OSHA limits. A provision for the installation of hydraulic test equipment has been incorporated, as well as a provision for programming faults by the instructor. The faults include, but are not limited to, binding flight controls, low hydraulic pressure, high oil temperature, low oil pressure, chip detector shorted, and flight control hydraulic pressure loss. The trainer frame is mounted on self-locking, full swivel type rubber tired casters.

Physical Information:
Trainee station: 480'' x 240''
Hydraulic cart: 120'' x 125''
Weight: 50,000 lb
Height: 144''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Installation in a hanger and a self-contained hydraulic system is required.

DVC 01-107

Power Requirements:
Trainer: 110 vac
Hydraulic cart: 220 vac

Applicable Publications:
NAV P-4418

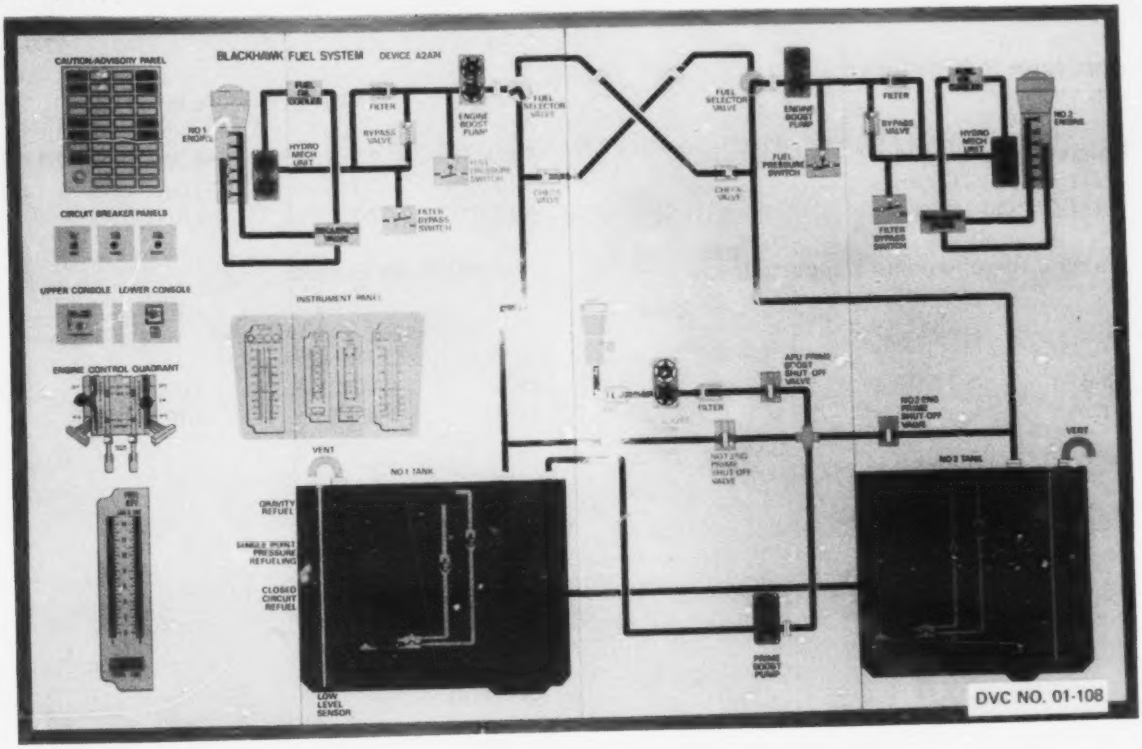
Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:
Supports 67T 10-, 20-, and 30-level courses.

BLACK HAWK FUEL TRAINER

DVC 01-108

NSN 6930-01-080-2055


BLACKHAWK FUEL SYSTEM DEVICE A2A74
CAUTION/ADVISORY PANEL
CIRCUIT BREAKER PANELS
UPPER CONSOLE
LOWER CONSOLE
ENGINE CONTROL QUADRANT
INSTRUMENT PANEL
NO 1 ENGINE
FUEL OIL COOLER
HYDRO MECH UNIT
FILTER
BYPASS VALVE
ENGINE BOOST PUMP
FUEL SELECTOR VALVE
FUEL PRESSURE SWITCH
CHECK VALVE
FILTER BYPASS SWITCH
SEQUENCE VALVE
VENT
NO 1 TANK
GRAVITY REFUEL
SINGLE POINT PRESSURE REFUELING
CLOSED CIRCUIT REFUEL
LOW LEVEL SENSOR
NO 2 ENGINE
APU PRIME BOOST SHUT OFF VALVE
NO 2 ENG PRIME SHUT OFF VALVE
NO 1 ENG PRIME SHUT OFF VALVE
NO 2 TANK
PRIME BOOST PUMP
DVC NO. 01-108

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is for classroom use in the support of maintenance training for aircrews on the UH-60 Helicopter. It provides a realistic environment for presenting the Fuel System components of the production aircraft. The use of operational equipment and system simulation offers a comprehensive means of instructing installation, servicing, adjustment, and troubleshooting procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer displays the complete Fuel System in animated, sectionalized, pictorial backlighted form. It provides the instructor with the controls; backlighted schematic; and built-in electrical logic which will permit demonstration of the theory of system operations, isolating malfunctions, and making proper adjustments or replacements. The instructor's panel permits the instructor to insert specific conditions of normal or abnormal nature.

Physical Information:

72" x 120" x 24"; 650 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

DVC 01-108

Power Requirements:
110 vac, 60 cycle

Applicable Publications:
NAV P-4487

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-8-3
5-11-4
5-11-5
5-11-6
5-12-3

ARTEP 17-205 Tasks

1-10-2
2-5-1
2-7-1
2-7-2
2-7-3

ARTEP 17-385 Tasks

2-7-1
2-7-2
2-7-3

ARTEP 57-55 Tasks

5-8-A
5-10-A
6-1-D
7-1-B
7-1-D
7-3-C
7-8-A
7-11-A
7-11-G
7-13-A
7-14-I

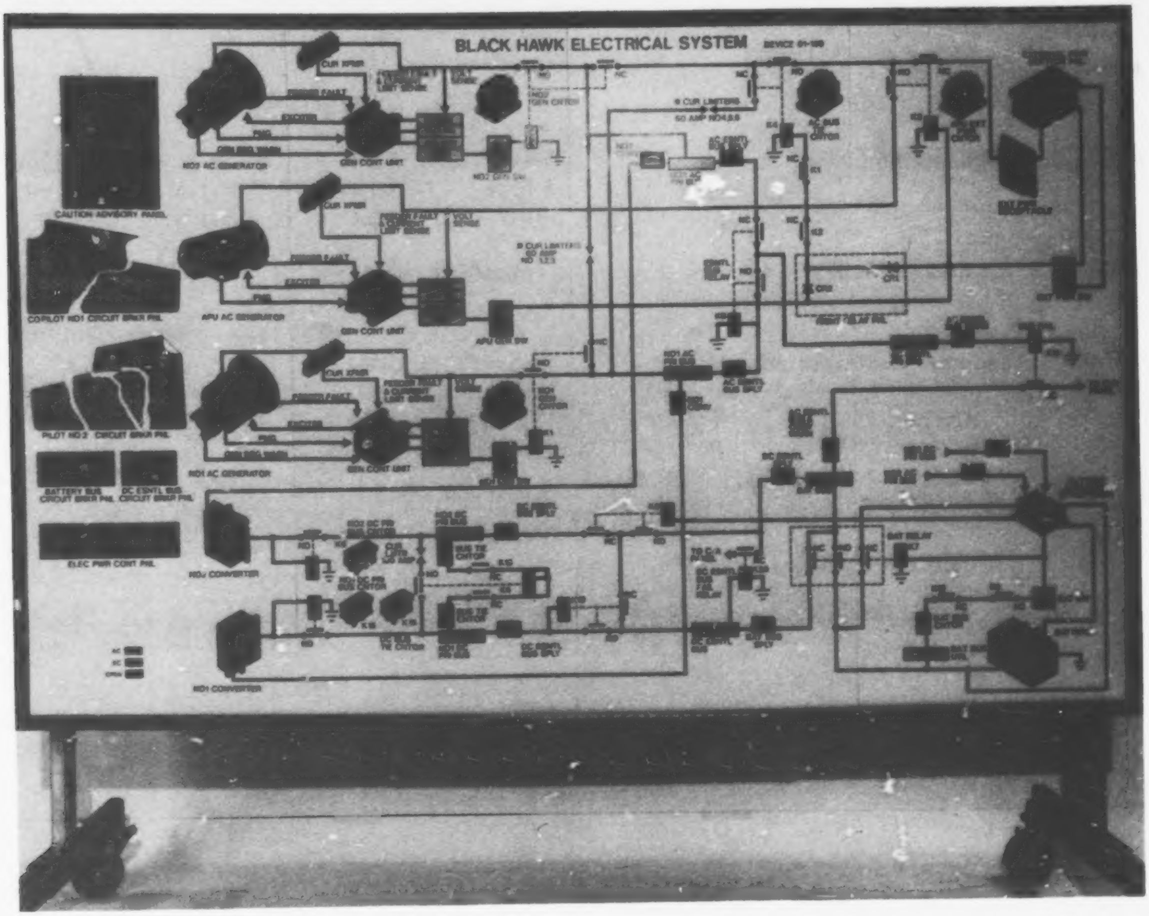
MOSC 15-1N and 100

ATM Tasks

1502
1503
4007
4008
4009
4010
6501

BLACK HAWK ELECTRICAL PANEL TRAINER

DVC 01-109 **NSN 6930-01-080-2056**


BLACK HAWK ELECTRICAL SYSTEM
CAUTION ADVISORY PANEL
NO2 AC GENERATOR
GEN CONT UNIT
APU AC GENERATOR
NO1 AC GENERATOR
COPILOT NO1 CIRCUIT BRKR PNL
PILOT NO 2 CIRCUIT BRKR PNL
BATTERY BUS CIRCUIT BRKR PNL
DC ESNTL BUS CIRCUIT BRKR PNL
ELEC PWR CONT PNL
NO2 CONVERTER
NO1 CONVERTER
EXCITER
PMG

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is for classroom training, providing a realistic environment for familiarization and instruction of personnel in the operation and maintenance of the UH-60 Electrical Systems. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The Electrical Systems Trainer displays the Electrical Systems in animated, sectionalized, pictorial, and back lighted form. It provides the instructor with the controls, backlighted schematic, and built-in electrical logic, which will permit demonstration of the theory of systems operation; and with the recommended procedures for analyzing normal versus abnormal operations, isolating the malfunctions, and making the proper adjustments or replacements.

Physical Information:

Panel: 60'' x 120'' x 24''
Console: 52'' x 29'' x 63''

Equipment Required, Not Supplied:

None

DVC 01-109

Special Installation Requirements:
None

Power Requirements:
110 vac, 60 cycle

Applicable Publications:
NAV P-4489

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-8-3	5-11-5	5-11-6	5-12-3
5-11-4			

ARTEP 17-205 Tasks

1-10-2	2-7-1	2-7-2	2-7-3
2-5-1			

ARTEP 17-385 Tasks

2-7-1	2-7-2	2-7-3

ARTEP 57-55 Tasks

5-8-A	7-1-B	7-8-A	7-13-A
5-10-A	7-1-D	7-11-A	7-14-I
6-1-D	7-3-C	7-11-G	

MOSC 15-1N and 100

ATM Tasks

1501	1503	4005	4010
1502	3501	4006	6501

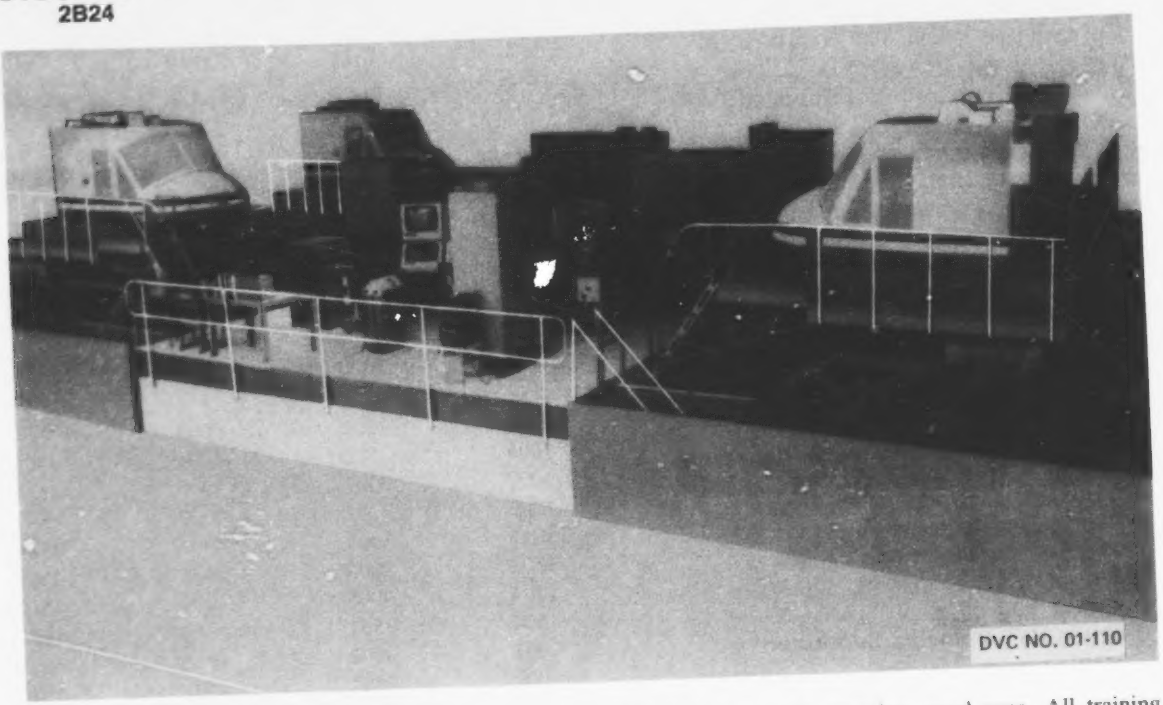
SM 551-68F Tasks

1003	1067	2005	2086

TRAINER SYNTHETIC FLIGHT SYSTEM: ROTARY WING/VTOL

DVC 01-110
2B24

NSN 6930-00-477-6284



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

AVSCOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To provide training in the techniques of instrument flight in a helicopter and to aid in maintaining proficiency in those techniques after completion of formal training. The trainer is used for initial and refresher training of aviators in cockpit procedures, instrument flying techniques, and radio navigation for rotary-wing aircraft. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is comprised of four simulated UH-1H cockpits mounted on motion platforms with 5 degrees of freedom to provide motion cues, a digital computation system, and an instructor station. A sound system is included to provide complete aural cues. All training functions for each cockpit can be controlled by the device operator through the computer complex. Reliability and ease of maintenance are incorporated into the device through use of the modular construction concept. Under this concept, individual modules perform the computation, instruction, simulation (student cockpit), and the cockpit motion functions.

The digital computers used in this training device are programed to perform many of the repetitive operations traditionally assigned to the human instructor. The instructor is now able to supervise simultaneously the training of as many as four students, each flying a different mission, since he is relieved of these tedious aspects of his job. While this changes the traditional one-to-one student-instructor ratio, the instructor retains the ability to override the computer and work individually with any student who needs his assistance. This multistudent capability is made possible by a feature called the automatic training mode. In this mode, prerecorded briefings and instructions prepare the student for his lesson. If a demonstration is necessary, computer programs activate the motion base and appropriate cockpit displays, thus enabling the instructor to explain difficult flight maneuvers to students in either real time or slow time.

DVC 01-110

Physical Information:
Trainer: 750'' x 480'' x 240''
Hydraulic pump unit: 480'' x 144'' x 120''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
A climatically controlled building that maintains an ambient room temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:
Trainer: 110/220 vac, 30 A, 3-phase, 4 wires, 36 kva
Hydraulic pump unit: 220/440 vac, 3-phase, 4 wires, 40.5 kva, 243.2 kva

Applicable Publications:
TM 55-6930-207 Series

Reference Publications:
TM 55-1520-210 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-4-4
5-8-4
5-12-3
5-12-4

ARTEP 55-167 Tasks

E-2
E-3
E-11
E-13
E-16

ARTEP 57-55 Tasks

5-E-1
5-5-D
5-9-C
5-9-F
5-9-H
7-4-F
7-6-D
7-8-D
7-12-E
7-12-H
7-12-L
7-14-B

MOSC 15-1E and 100B

ATM TC 1-135 Tasks

1005
1006
1007
1009
1015
1502
1503
1504
2001
2002
2003
2004
2005
2501
2502
3001
3002
3003
3004
3005
3501
3502
3505
4001
4002
4003
4004
4005
4006
4007
4008
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4010
4011
4501
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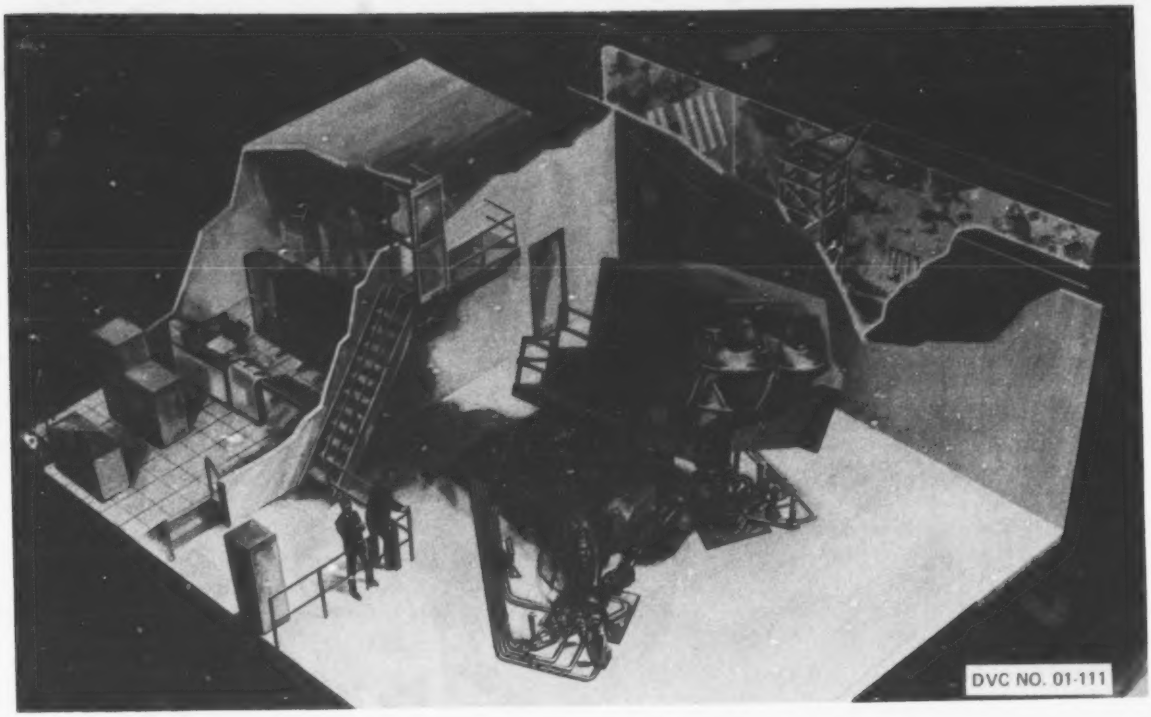
5021
5023
5026
5027
6501

CH-47 FLIGHT SIMULATOR

DVC 01-111
2B31

NSN 6930-00-347-6758



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

To provide training in the techniques of visual and instrument flight in the CH-47 Helicopter and to aid in maintaining proficiency in these techniques after completion of formal training. The trainer is used for initial and refresher training of aviators in cockpit procedures, visual flying techniques, instrument flying techniques, and radio navigation for the CH-47C Helicopter. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of one simulated CH-47C Helicopter cockpit mounted on a 6-degree freedom of motion system. The system is controlled by two DEC PDP 11/45 computers. A visual system is provided which includes a high resolution television/camera/model board chain that provides identical displays out the front window for the pilot and copilot trainee stations. A computer generated checkerboard display is presented through the chin windows to provide height above ground and relative motion information. An instructor station is located in the cockpit behind the trainee stations.

Physical Information:
Cockpit area: 192'' x 192'' x 216''
Computer room: 360'' x 240'' x 120''
Hydraulic area: 144'' x 120'' x 126''
Visual: 960'' x 480'' x 372''

Equipment Required, Not Supplied:
None

DVC 01-111

Special Installation Requirements:

Climatically controlled building that maintains an ambient room temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

Cockpit and visual: 120-280 vac, 3-phase, 4 wire, 60 cycle

Hydraulic: 227-480 vac, 3-phase, 4 wire, 60 cycle

Applicable Publications:

TM 55-6930-209 Series

Reference Publications:

TM 55-1520-209 Series

Training Requirements Supported:

ARTEP 55-167 Tasks

C-5
D-1
D-4
D-6
D-7
D-8
D-11

MOSC 15-1G and 100C

ATM Tasks

1502
1503
1504
2001
2002
2003
2004
2005
2006
2007
2501
2502
3001
3002
3003
3005
3501
3502
3503
3504
3505
4001
4002
4003
4004
4005
4006
4007
4008
4009
4010
4011
4012
4013
4501
4502
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4509
4510
4511
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5002
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5012
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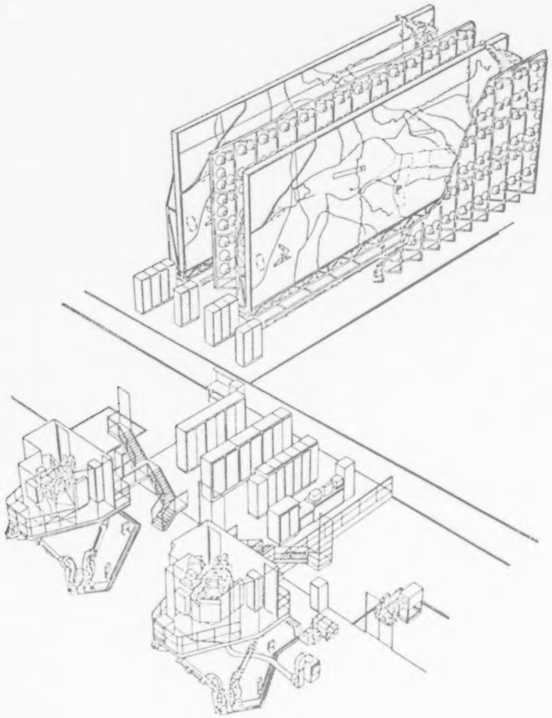
5015
5016
6001
6002
6501

AH-1 FLIGHT SIMULATOR

DVC 01-112
2B33

NSN 6930-00-614-9644



DVC NO. 01-112

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

AVSCOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To provide training in the techniques of nap-of-the-earth, contour, low level, and instrument flight in the AH-1 Helicopter, and to aid in maintaining proficiency in these techniques after completion of formal training. The trainer is used for initial and refresher training of aviators in cockpit procedures, emergency procedures, and tactical flying techniques for the AH-1 Helicopter. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of two simulated AH-1 Helicopter cockpits, one for the pilot trainee and one for the gunner trainee. Each cockpit is mounted on a 6-degree freedom of motion system and contains an integral instructor station. The entire system is controlled by three DEC PDP 11/45 computers. A high resolution visual display is presented in each cockpit through a television/camera/model board chain. All AH-1 weapons are simulated. Firing is accomplished as in the actual aircraft including use of the helmet sighting system and the telescopic sighting system. Weapons effects such as tracers, rocket motors, and impacts are computer generated imagery superimposed over the visual display.

Physical Information:

Cockpit area: 984" x 480" x 384"
Computer room: 360" x 240" x 120"
Hydraulic pump: 240" x 240" x 120"
Visual system: 960" x 552" x 372"

DVC 01-112

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Climatically controlled building that maintains an ambient room temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

Cockpit and visual: 120-280 vac, 3-phase, 4 wire, 60 cycle

Hydraulic: 227-480 vac, 3-phase, 4 wire, 60 cycle

Applicable Publications:

TM 55-6930-210 Series

Reference Publications:

TM 55-1520-221 Series

Training Requirements Supported:

ARTEP 17-205 Tasks

0-9-2
0-9-3
0-9-4
0-10-1
0-10-3
0-10-7
1-6-5
1-6-6
1-6-8
1-7-5
1-7-6
1-7-9
1-18-1
1-18-2
1-18-3
1-18-5
1-8-6
1-18-7
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1-18-10
1-19-3
1-19-4
1-19-5
1-19-10
1-19-11
1-19-12
1-19-13
1-19-14
1-19-15
2-1-4
2-2-5
2-10-1
2-10-2
2-10-3
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2-10-8
2-11-3
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2-11-10
2-11-11
2-11-12
2-11-13
2-11-14
3-1-6
3-1-7
3-2-5
3-2-6
3-2-8
3-3-5
3-3-6
3-3-8
3-4-4
3-4-5
3-4-7
3-5-3
3-5-5
3-11-1
3-11-2
3-11-3
3-11-4
3-11-5
3-11-6
3-12-3
3-12-4

ARTEP 17-385 Tasks

0-8-2
0-8-3
0-8-4
0-8-6
0-8-7
0-8-8
0-10-1
0-10-7
0-92
0-93
0-94
1-1-7
1-2-10
1-2-14
1-3-4
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1-9-14
1-9-15
1-10-5
1-10-6
1-10-8
1-10-9
1-10-10
2-1-5
2-4-3
2-4-5
2-4-11
2-4-12
2-4-13
2-4-14
2-4-15
2-5-1
2-5-3
2-5-4
2-5-5
2-5-6
2-5-7
2-5-8
3-1-7
3-2-6
3-2-7
3-2-8
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3-4-3
3-4-7
3-4-8
3-5-1
3-5-2
3-5-3
3-5-4
3-5-5
3-5-6

ARTEP 57-55 Tasks

5-6-B
5-6-C
5-6-D
5-7-A
7-9-C
7-9-D
7-10-A
7-10-B
7-14-A
7-14-C
7-15-B
7-15-C
7-15-D
7-15-F
7-15-G
7-15-H
7-16-A
7-17-B
7-17-C
7-17-D

DVC 01-112

MOSC 15-1M and 100G

ATM Tasks

1201
1202
1203
1204
1205
1301
1302
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1401
1402
1403
1501
1502
1503
1504
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1843
1901
2001
2002
2006
2008
2012
2201
2202
2301
2302
2303
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2310
2311
2312
2314
2315
2316
3002
3003
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4010
4011
4012
5001
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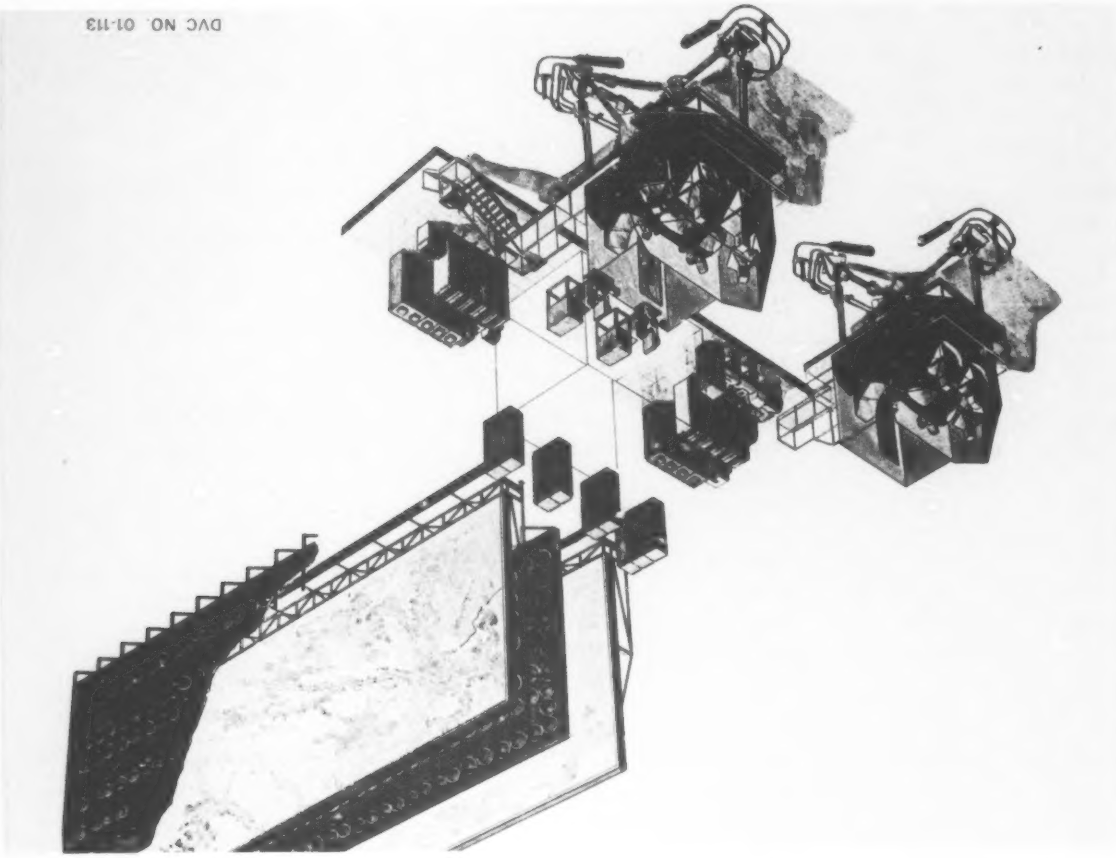
7010

BLACK HAWK FLIGHT SIMULATOR

DVC 01-113

NSN 6930-00-614-9643



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

To provide training in the techniques of day/night visual and instrument flight in the UH-60 Helicopter, and to aid in maintaining proficiency in these techniques after completion of formal training. The trainer is used for initial and refresher training of aviators in cockpit procedures, emergency procedures, day/night visual and instrument flying techniques for the UH-60-type of aircraft. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The Black Hawk Flight Simulator consists of two cockpits each on a six-degree freedom of motion platform. One cockpit is provided with visual imagery derived from a camera model board visual system, while the other cockpit is provided visual imagery from a computer generated imagery system. Each cockpit is an authentic replica of the actual aircraft from the pilot and copilot station forward. Both cockpits have an on-board instructor station to control training and evaluate student performance. High speed visual computation permits real-time simulation and display of aircraft performance. Automated training and performance measurement techniques provide for standard instruction and objective evaluation.

Physical Information:

Cockpit area: 480" x 480" x 360" high
Computer area: 240" x 360" x 120" high
Hydraulic area: 144" x 144" x 120" high
Visual area: 600" high x 1,008" long.

DVC 01-113

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Climatically controlled building that maintains an ambient temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

Trainer and light bank: 120-208 vac, 3-phase, 4 wire, 60 Hz

Hydraulic pump: 277-480 vac, 3-phase, 4 wire, 60 Hz

Applicable Publications:

TM 55-6930-211 Series

Reference Publications:

TM 55-1526-237 Series
TM 55-2840-248 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-4-4
5-8-4
5-12-3
5-12-4

ARTEP 17-205 Tasks

1-15-2
1-15-3
1-15-4
2-1-4
3-8-2
3-8-3

ARTEP 55-89 Tasks

5-1-2
5-1-3
5-1-4

ARTEP 57-55 Tasks

5-1-E
5-5-D
5-9-C
5-9-F
5-9-H
7-4-E
7-6-D
7-8-D
7-12-E
7-12-H
7-12-L
7-14-B

MOSC 15-1N and 100

ATM Tasks

1502
1503
1504
2001
2002
2003
2004
2005
2501
2502
3001
3002
3003
3004
3501
3502
3503
3504
3505
4001
4002
4003
4004
4005
4006
4007
4008
4009
4010
4011
4501
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6001
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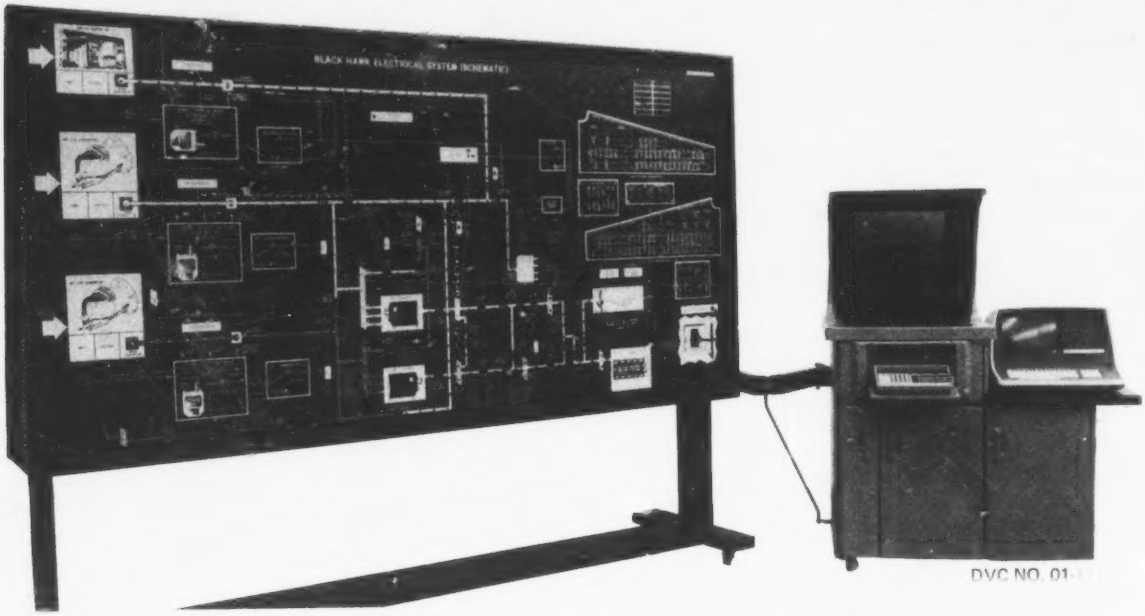
6005
6011
6501

BLACK HAWK ELECTRICAL SYSTEM PANEL TRAINER

DVC 01-115

NSN 6930-01-080-2051



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer is for classroom use in support of aviator and crewman system familiarization training. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The BLACK HAWK Electrical System Pilot Familiarization Panel, when used with the EC 3 computer, will demonstrate the aircraft ac and dc electrical system operation to US Army aviators. A color coded block diagram schematic layout dynamically simulates power generation, distribution, and control, using surface lighting for the ac and dc circuit paths.

The panel utilizes a small locator view of the cockpit with needed active components raised (e.g., switches, circuit breakers, advisory lamps) to give the instructor the ability to demonstrate system response via cockpit controls. This will allow the student to become familiar with the controls and indicators of the electrical system with respect to other cockpit components.

Through the EC 3 control console keyboard and displays, the instructor is able to perform trainer-peculiar simulations such as displaying pictures of system components, running the APU, running aircraft engines at various rpm, applying external power sources, etc. In addition, he is able to select various normal and malfunctioning system demonstrations.

In conjunction with automatic simulation program commands or instructor signals at the keyboard, a projector is used to display any of up to 150 visual projections on a 16-inch square screen.

Physical Information:
Panel: 120'' x 18'' x 60''
Computer: 65'' x 39'' x 48''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

DVC 01-115

Power Requirements:
110 vac

Applicable Publications:
NAV P-4513
PMS P-4508

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:

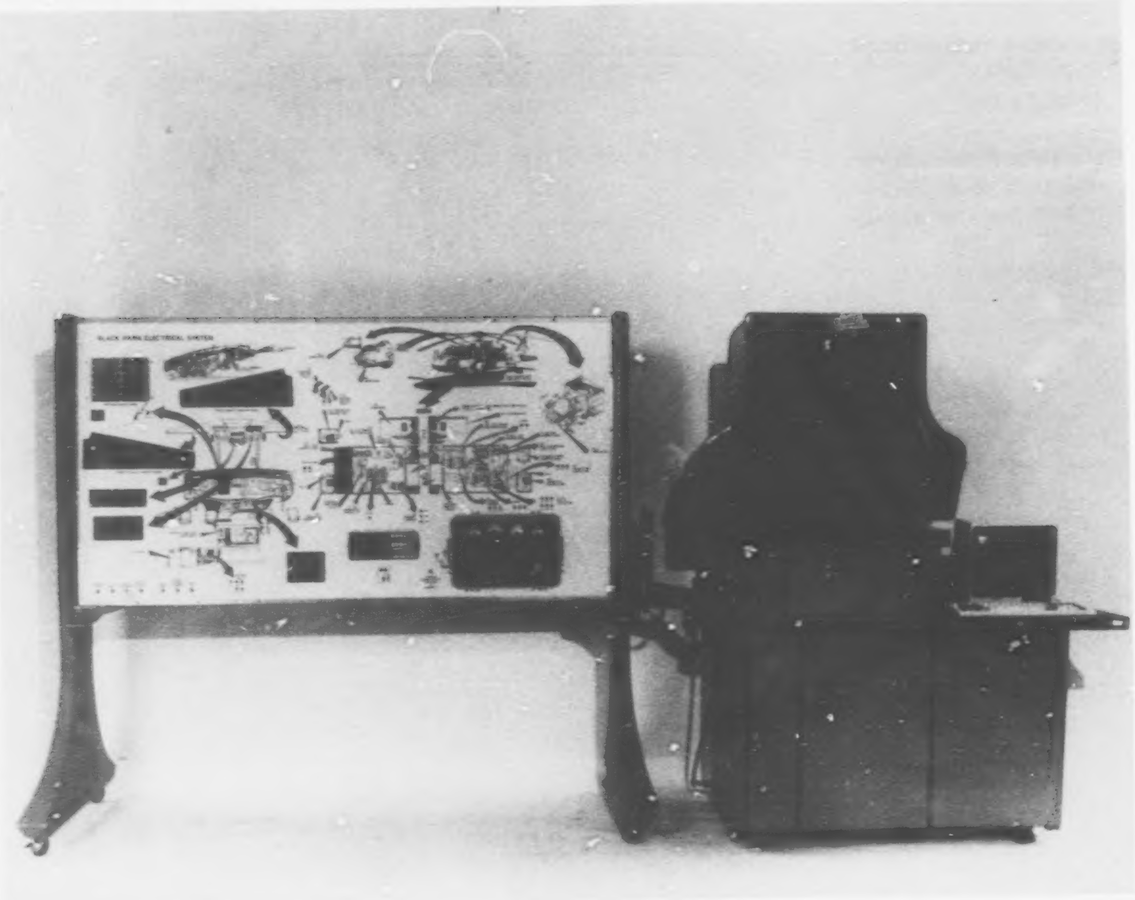
SM 551-68F Tasks

1003	1019	2007	2135
1004	2005		

BLACK HAWK ELECTRICAL SYSTEMS TRAINER (CLASSROOM)

DVC 01-116/1

NSN 6930-01-080-2050



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

This trainer is used for classroom training to demonstrate the functions of the Electrical System of the UH-60 Helicopter. It provides the means for training in the maintenance, inspection, troubleshooting, and safety of the UH-60 Electrical System. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The electrical trainer displays the operation of the ac and dc electrical and electronic systems including both the normal and malfunctioning conditions. Aircraft controls are active in order for both instructor and student to simulate operation of the system. Students are capable of "hands-on" operation of the trainer. Fault insertion capabilities have been provided, and all necessary test equipment for troubleshooting faults are incorporated on the panel. Student guidance and feedback based on interaction with the trainer is provided to assist in individual and self-paced capabilities. Components are displayed or located so that their relation to the approximate location on the helicopter is clearly visible.

Malfunctions include, but are not limited to open circuits in ac and dc systems, over voltage relay inoperative, inverter failure, loss of main generator, emergency bus relay inoperative, improper voltage output for ac and dc systems, and APU inoperative.

DVC 01-116/1

Physical Information:
Panel: 40'' x 76'' x 6''
Console: 28'' x 28'' x 64''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
NAV P-4510
PMS P-4502

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:

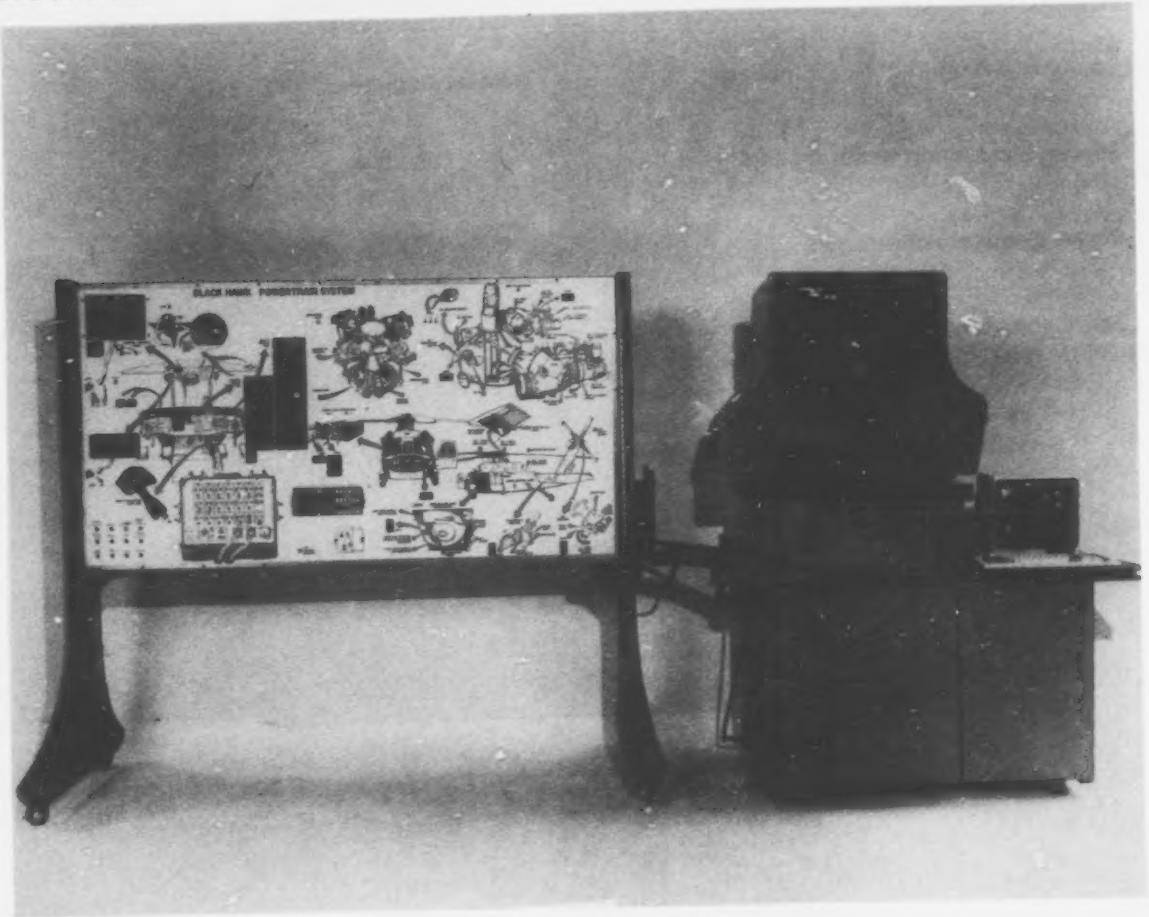
SM 551-68F Tasks

1003	1019	2007	2135
1004	2005		

BLACK HAWK POWER TRAIN SYSTEM TRAINER (CLASSROOM)

DVC 01-116/2

NSN 6930-01-081-0394



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer is used for classroom training to demonstrate the functions of the power train system of the UH-60 Helicopter. It provides the means for training in the maintenance, inspection, and troubleshooting areas of the UH-60 Power Train System. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is able to portray all operations of the power train and related hydraulics associated with the power train. These systems are displayed or simulated in such a manner that both normal and malfunctioning conditions associated with the power train can be observed by the student, and the student can physically practice fault isolation and troubleshooting techniques. Incorporated on the panel trainer are all meters and flightline test equipment which, in a simulated mode, allow the students to practice diagnostic procedures. All aircraft controls relative to these systems are shown in an active manner to reflect all normal and malfunction conditions.

Physical Information:
Panel: 40'' x 76'' x 6''
Console: 28'' x 28'' x 64''

DVC 01-116/2

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
NAV P-4504
PMS P-4511

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:
Supports 67T 10-, 20-, and 30-level courses.

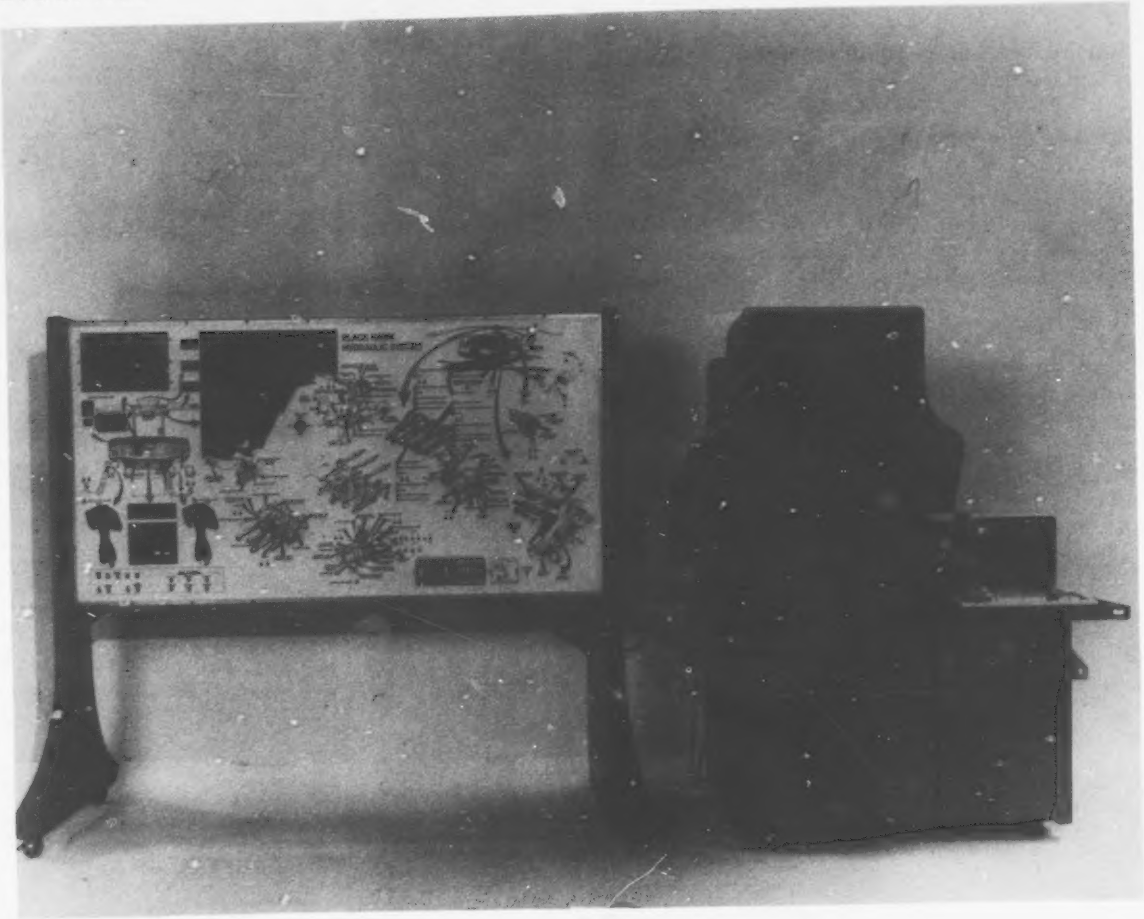
SM 551-68F Tasks

1003 1004 2005 2007

BLACK HAWK HYDRAULIC SYSTEM TRAINER (CLASSROOM)

DVC 01-116/3

NSN 6930-01-080-2048



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

This trainer is used for classroom training to demonstrate the functions of the Hydraulic System of the UH-60 Helicopter. It provides the means for training in the maintenance, inspection, and troubleshooting areas of the UH-60 Hydraulic System.

Functional Description:

The purpose of the panel trainer is to teach hydraulic mechanics to perform operational checks, and to adjust and troubleshoot components of the BLACK HAWK Hydraulic System. The trainer depicts, by means of graphic displays of components and subsystems tied together in a schematic representation, operable gauges and switches, and other means necessary to lend training effectiveness.

Physical Information:
Panel: 40'' x 76'' x 6''
Console: 28'' x 28'' x 64''

Equipment Required, Not Supplied:
None

DVC 01-116/3

Special Installation Requirements:
None

Power Requirements:
110 vac

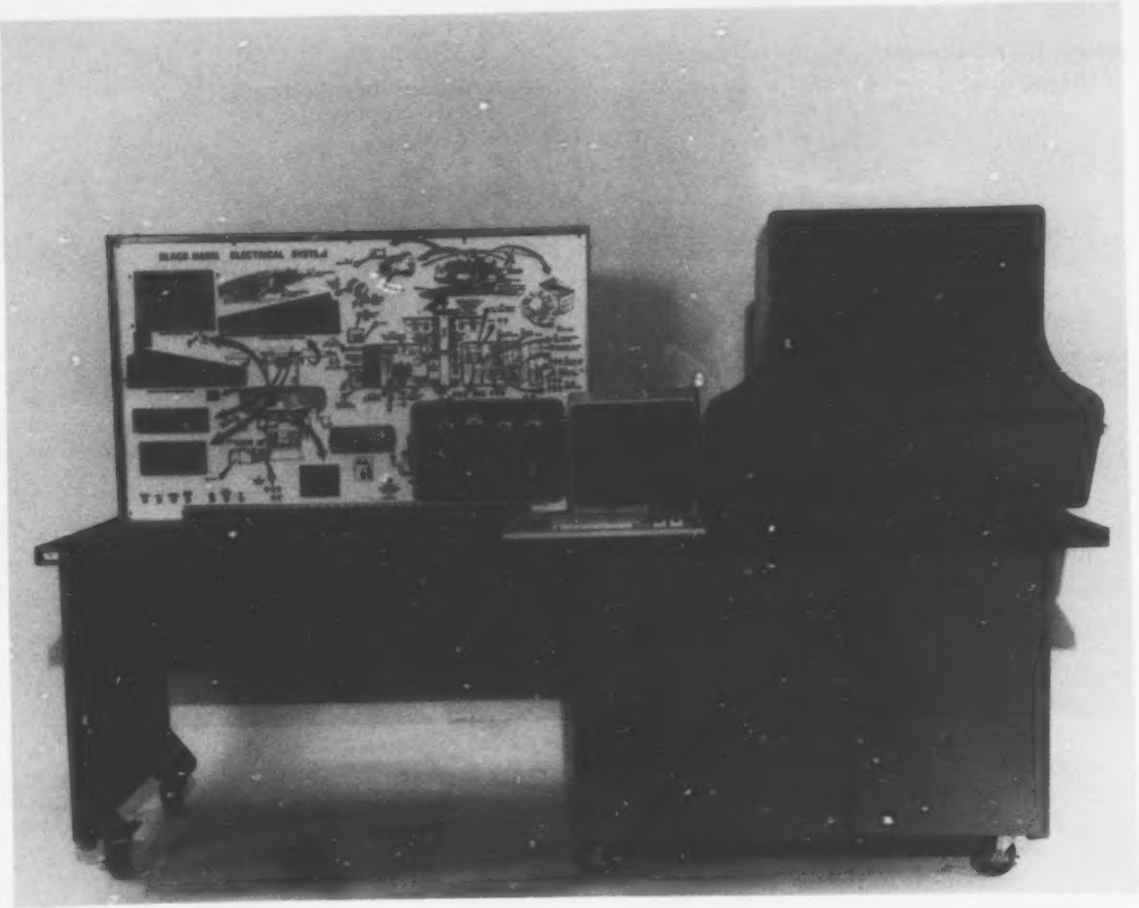
Applicable Publications:
NAV P-4512
PMS P-4506

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

BLACK HAWK ELECTRICAL SYSTEMS TRAINER (INDIVIDUAL)

DVC 01-117/1

NSN 6930-01-080-2049



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

This trainer is used for individual training, to demonstrate the functions of the Electrical System of the UH-60 Helicopter. It provides the means for training in the maintenance, inspection, troubleshooting, and safety of the UH-60 Electrical System. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The electrical trainer displays the operation of the ac and dc electrical and electronic systems including both the normal and malfunctioning conditions. Aircraft controls are active in order for both instructor and student to simulate operation of the system. Students are capable of "hands-on" operation of the trainer. Fault insertion capabilities have been provided, and all necessary test equipment for troubleshooting faults are incorporated on the panel. Student guidance and feedback based on interaction with the trainer is provided to assist in individual and self-paced capabilities. Components are displayed or located so that their relation to the approximate location on the helicopter is clearly visible.

Malfunctions include, but are not limited to, open circuits in ac and dc systems, over voltage relay inoperative, inverter failure, loss of main generator, emergency bus relay inoperative, improper voltage output for ac and dc systems, and APU inoperative.

DVC 01-117/1

Physical Information:
Panel: 28'' x 48'' x 10''
Console: 76'' x 29'' x 29''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
NAV P-4510
PMS P-4503

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

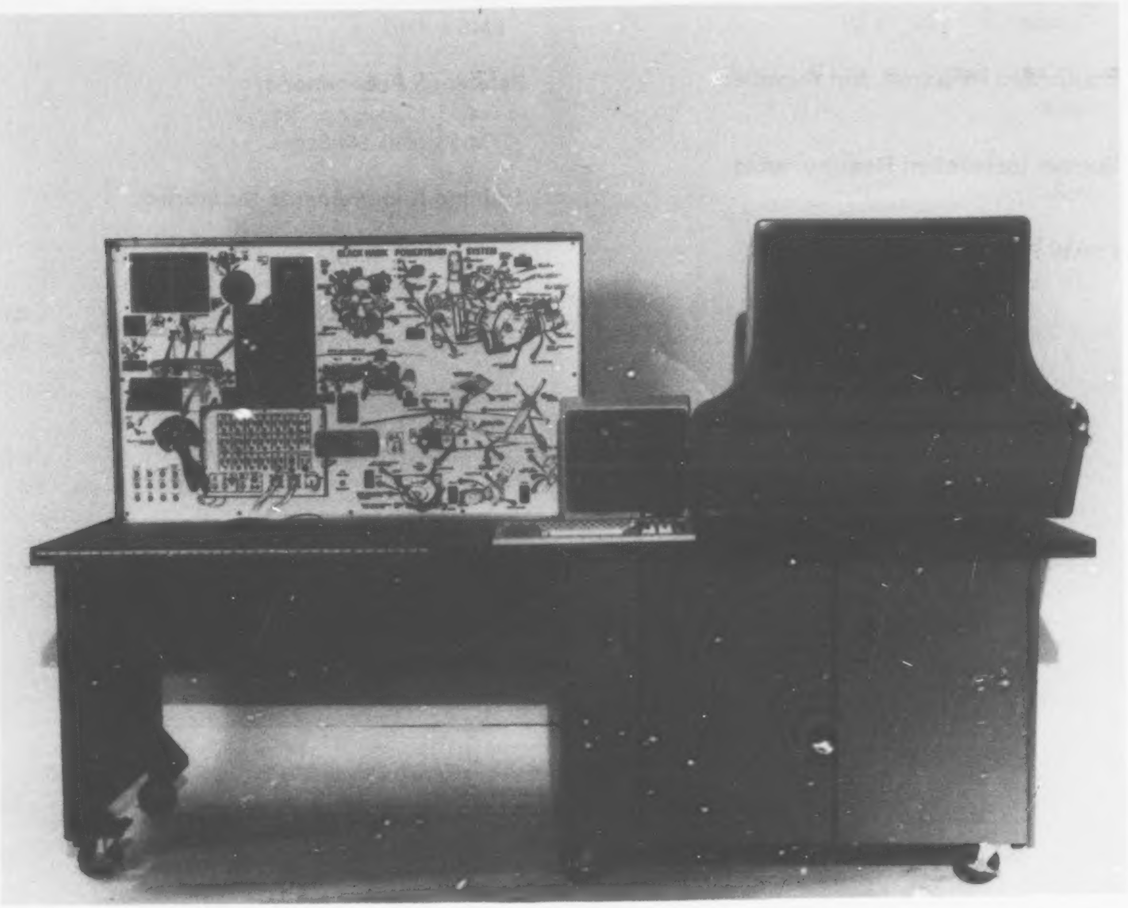
Training Requirements Supported:

SM 551-68F Tasks

1003
1004
1019
1067
2005
2007
2086
2135

BLACK HAWK POWER TRAIN SYSTEM TRAINER (INDIVIDUAL)

DVC 01-117/2 **NSN 6930-01-080-2045**



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

This trainer is used for classroom training to demonstrate the functions of the Power Train System of the UH-60 Helicopter. It provides the means for training in the maintenance, inspection, and troubleshooting areas of the UH-60 Power Train System. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is able to portray all operations of the power train and related hydraulics associated with the power train. These systems are displayed or simulated in such a manner that both normal and malfunctioning conditions associated with the power train can be observed by the student, and the student can physically practice fault isolation and troubleshooting techniques. Incorporated on the panel trainer are all meters and flightline test equipment which in a simulated mode allow the students to practice diagnostic procedures. All aircraft controls relative to these systems are shown in an active manner to reflect all normal and malfunction conditions.

DVC 01-117/2

Physical Information:
Panel: 28'' x 48'' x 10''
Console: 76'' x 29'' x 29''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
NAV P-4511
PMS P-4505

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

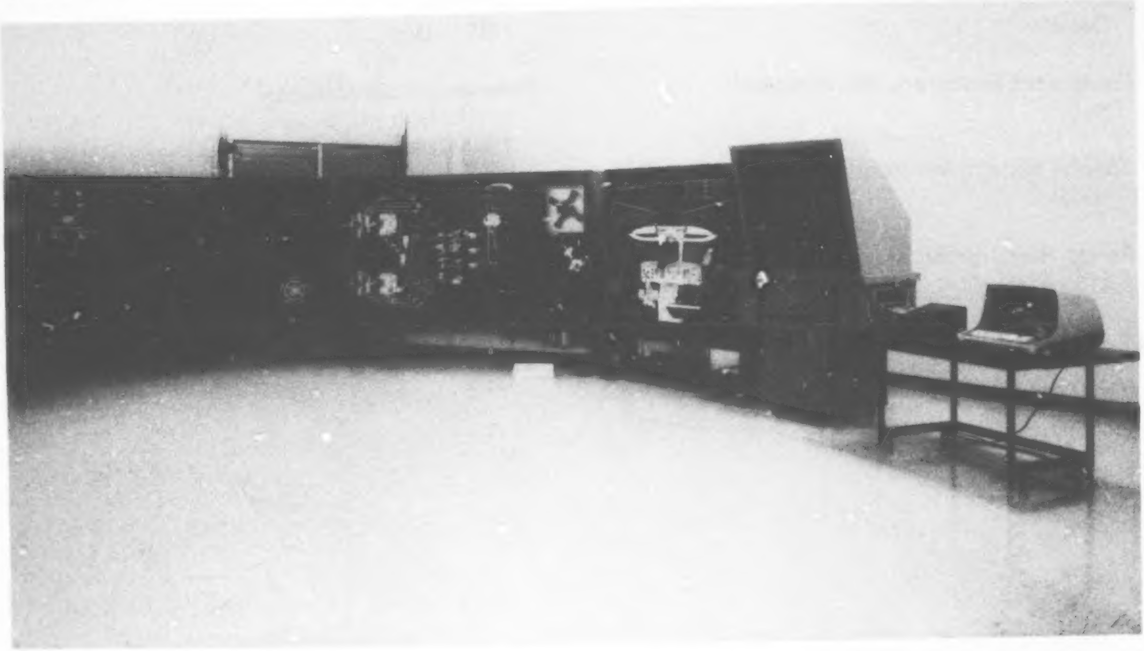
Training Requirements Supported:

SM 551-68F Tasks

1003	1004	2005	2007

BLACK HAWK PROGRAMMABLE COMPOSITE TRAINER

DVC 01-118 NSN Pending



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is for classroom use, providing a realistic environment for instruction of aviation and maintenance personnel in the operation and maintenance of the UH-60 Helicopter. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of an instructor console with a viewing screen on which 35mm visuals are projected and the following display panels.

a. Cockpit Panel. Presents a view of the cockpit with active collective control stick, cyclic control stick, tail rotor control pedals, and engine quadrant controls. Also included are backlighted indicators, control panels, and caution/advisory panel.

b. Flight Control Panel. Contains a silhouette or the BLACK HAWK Helicopter and displays the main components of the stability augmentation, flight path stabilization, stabilator, train, and pitch bias actuator systems.

c. Power Train Cross Section Panel. A backlighted pictorial breakdown of the power train system which includes a view of the main transmission, main rotor, tail rotor, rotor blades' engines, and APU. Sequenced lighting provides a visual impression of flow, flow rates and rotation of flight controls and transmission. Controls and lighting on this panel respond to the active controls on the cockpit panel.

Physical Information:

Power train panel: 60'' x 60'' x 24''
Flight control panel: 60'' x 120'' x 24''
Cockpit panel: 60'' x 120'' x 24''
Console: 29'' x 29'' x 70''
Instructor station: 60'' x 30'' x 36''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

DVC 01-118

Power Requirements:
110 vac, 60 cycle

Applicable Publications:
NAV P-4648

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-8-3
5-11-4
5-11-5
5-11-6
5-12-3

ARTEP 17-205 Tasks

1-10-2
2-5-1
2-7-1
2-7-2
2-7-3

ARTEP 17-385 Tasks

2-7-1
2-7-2
2-7-3

ARTEP 57-55 Tasks

5-8-A
5-10-A
6-1-D
7-1-B
7-1-D
7-3-C
7-8-A
7-11-A
7-11-G
7-13-A
7-14-I

MOSC 15-1n and 100

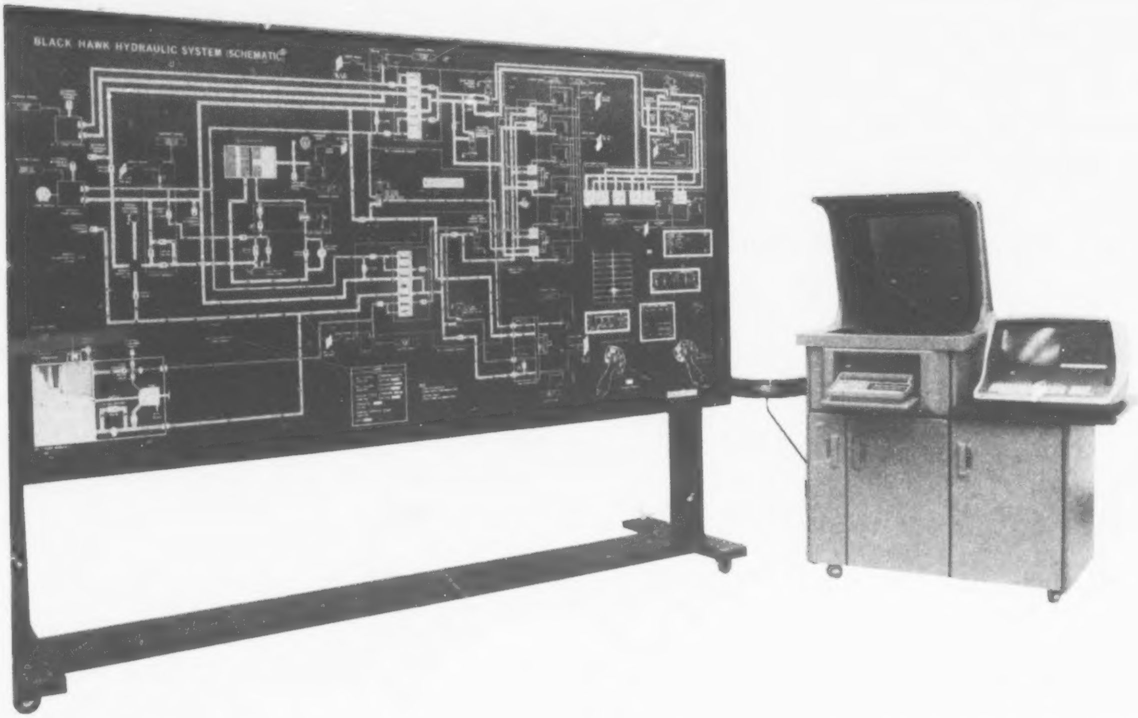
ATM Tasks

1501
1502
1503
3002
3003
3501
4005
4006
4010
4502
6004
6005
6007
6501

BLACK HAWK HYDRAULIC PANEL TRAINER

DVC 01-119

NSN 6930-01-081-0395



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is used in classroom to provide a realistic environment for familiarization of aviation and maintenance personnel with the operation and maintenance theory of the UH-60 Hydraulic System. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The BLACK HAWK Hydraulic System Pilot Familiarization Panel, using the EC 3 computer, demonstrates the aircraft no 1, no. 2, and backup hydraulic systems operation. A color coded black diagram schematic layout simulates pressure generation, distribution, and control, using surface lighting for the hydraulic fluid paths.

The panel utilizes a small locator view of the cockpit with needed active components darted out (e.g., switches, circuit breakers, advisory lamps) to give the instructor the ability to demonstrate system response via cockpit controls. This will allow the student to become familiar with the controls and indicators of the hydraulic system with respect to other cockpit components.

Through the control console keyboard and displays, the instructor is able to perform trainer-peculiar simulations such as displaying pictures of system components, running the APU, running aircraft engines at various rpm, applying external power sources, etc. In addition, he is able to select various normal and malfunctioning system demonstrations.

In conjunction with automatic simulation program commands or instructor signals at the keyboard, a projector is used to display any of up to 150 visual projections on a 16-inch square screen.

DVC 01-119

Physical Information:

Panel: 60'' x 120'' x 24''
Console: 52'' x 29'' x 63''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac, 60 cycle

Applicable Publications:

NAV P-4514
PMS P-4509

Reference Publications:

TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:

ARTEP 1-252 Tasks

5-8-3
5-11-4
5-11-5
5-11-6
5-12-3

ARTEP 17-205 Tasks

1-10-2
2-5-1
2-7-1
2-7-2
2-7-3

ARTEP 17-385 Tasks

2-7-1
2-7-2
2-7-3

ARTEP 57-55 Tasks

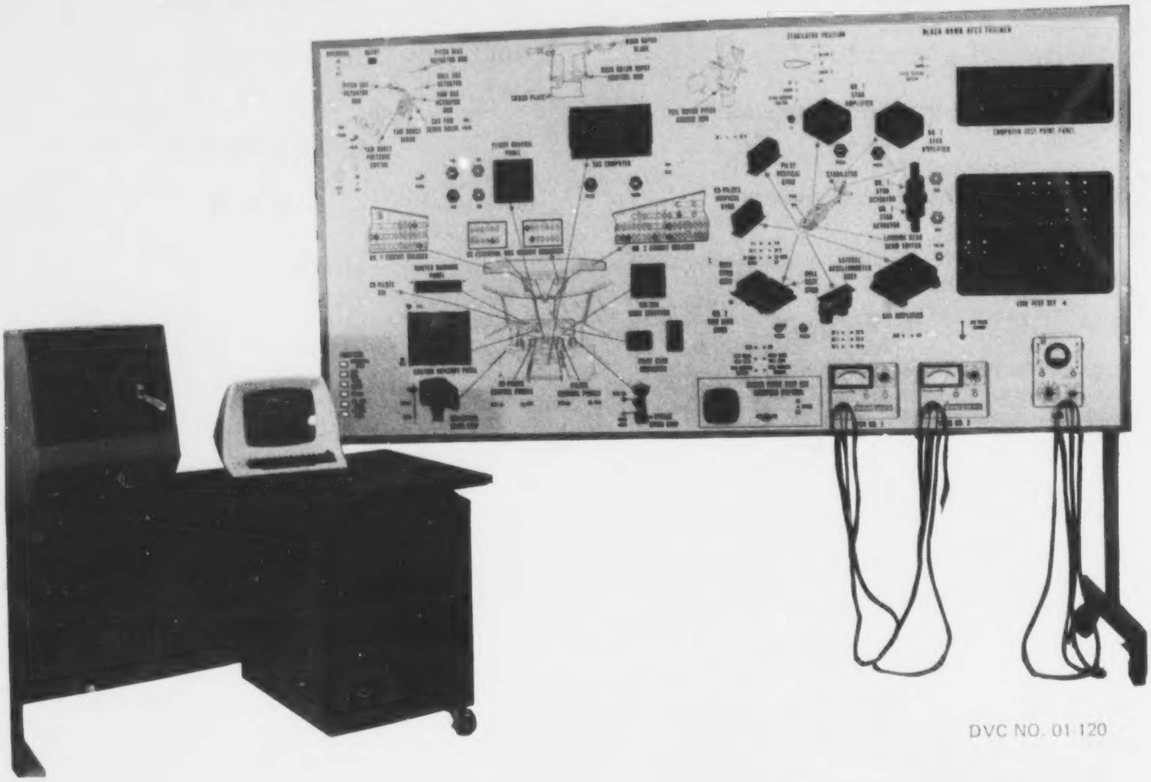
5-8-A
5-10-A
6-1-D
7-1-B
7-1-D
7-3-C
7-8-A
7-11-A
7-11-G
7-13-A
7-14-I

MOSC 15-N and 100

ATM Tasks

1501
1502
1503
3501
4005
4006
4010
6501

BLACK HAWK ELECTRONIC FLIGHT CONTROL SYSTEM TRAINER (CLASSROOM)



DVC NO. 01-120

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer is used for classroom training to demonstate the functions of the electronic flight control system on the UH-60 Helicopter.

Functional Description:
The training device is required to provide realistic hands-on training environment for avionics mechanic students. The avionics mechanic must be trained to perform operational checks, and to adjust and troubleshoot the avionics components in the Stability Augmentation System. The training device will enable the student to get classroom experience in performing GO/NO-GO checks, and diagnosing and replacing malfunctioning major components in the system.

Physical Information:
Pending

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
NAV P-4622
PMS P-4623

best copy available

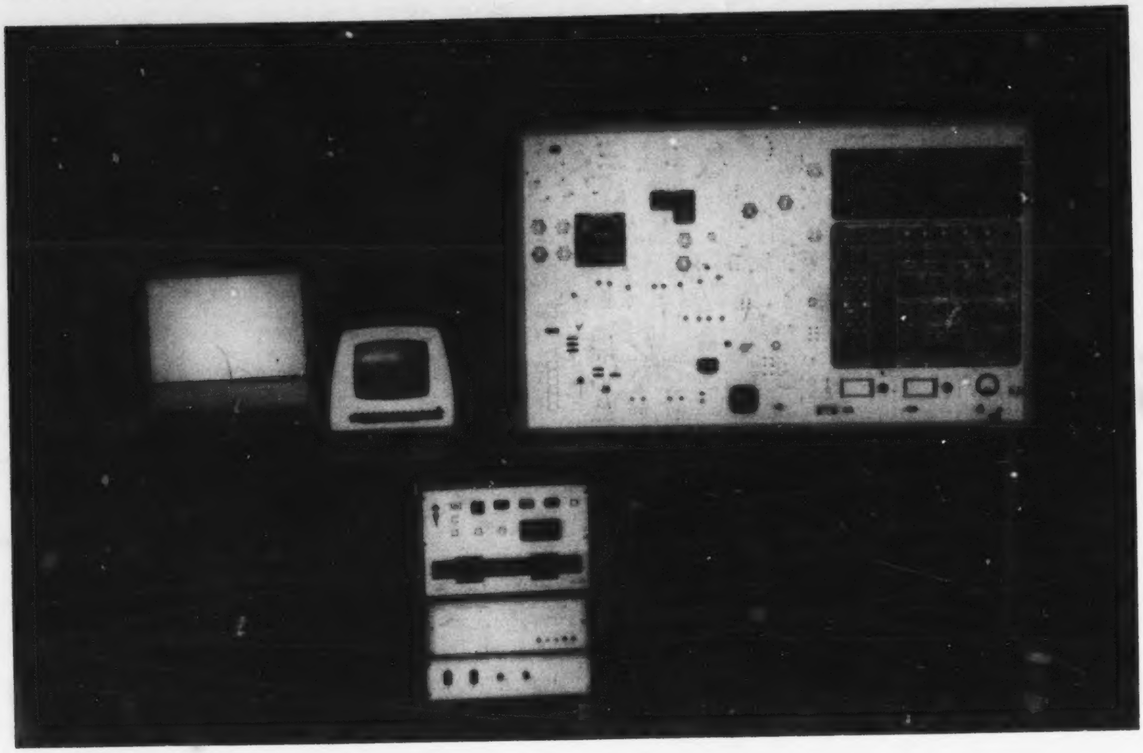
DVC 01-120

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:
MOSC 35K20

BLACK HAWK ELECTRONIC FLIGHT CONTROL SYSTEM TRAINER (INDIVIDUAL)

DVC 01-121 **NSN 6930-01-080-2046**



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

This trainer is used for classroom training to demonstrate the functions of the Electronic Flight Control System on the UH-60 Helicopter.

Functional Description:

The training device is required to provide a realistic hands-on training environment for avionics mechanic students. The avionics mechanic must be trained to perform operational checks, and to adjust and troubleshoot the avionics components in the Stability Augmentation System. The training device will enable the student to get classroom experience in performing GO/NO-GO checks, and diagnosing and replacing malfunctioning major components in the system.

Physical Information:
Pending

Equipment Required, Not Supplied:
Pending

Special Installation Requirements:
None

Power Requirements:
110 vac

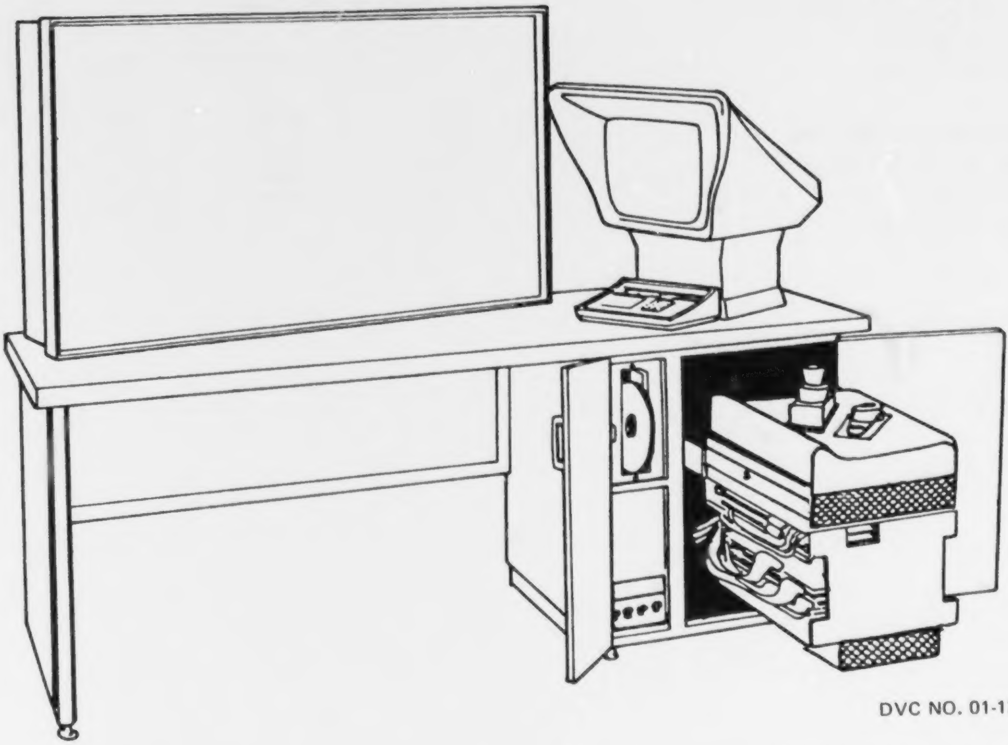
Applicable Publications:
NAV P-4624
PMS P-4625

Reference Publications:
TM 55-1520-237 Series
TM 55-2840-248 Series

Training Requirements Supported:
MOSC 35K20

TOW COBRA PROGRAMMABLE TRAINER (INDIVIDUAL)

DVC 01-122 NSN 6910-01-063-7536



DVC NO. 01-122

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer is used for individual training to provide a comprehensive means of teaching personnel the maintenance, inspection, and troubleshooting of the AH-1S helicopter ac/dc electrical systems and TOW weapon subsystems. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer consists of a panel mainframe in which display panels depicting the M65 TOW System, M128 Helmet Sight Subsystem, M28A1E1 Armament System, AC/DC Electrical Systems, Universal Turret System, Test Set, Guided Missile System, and Rocket Management Subsystem can be mounted; and a control console which houses a computer, controls, and a visual system. The trainer displays operation of these systems in both normal and malfunctioning conditions. Fault insertion capabilities are provided and all necessary test equipment for troubleshooting faults are incorporated in the appropriate panels.

Physical Information:
29'' x 76'' x 50''; 400 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

DVC 01-122

Applicable Publications:

NAVTRADEV P-4329
TM 55-6910-714
TM 55-6910-715
TM 55-6910-716

Reference Publications:

TM 55-1520-236 Series
TM 9-4935-473 Series
TM 9-1270-212-14

Training Requirements Supported:

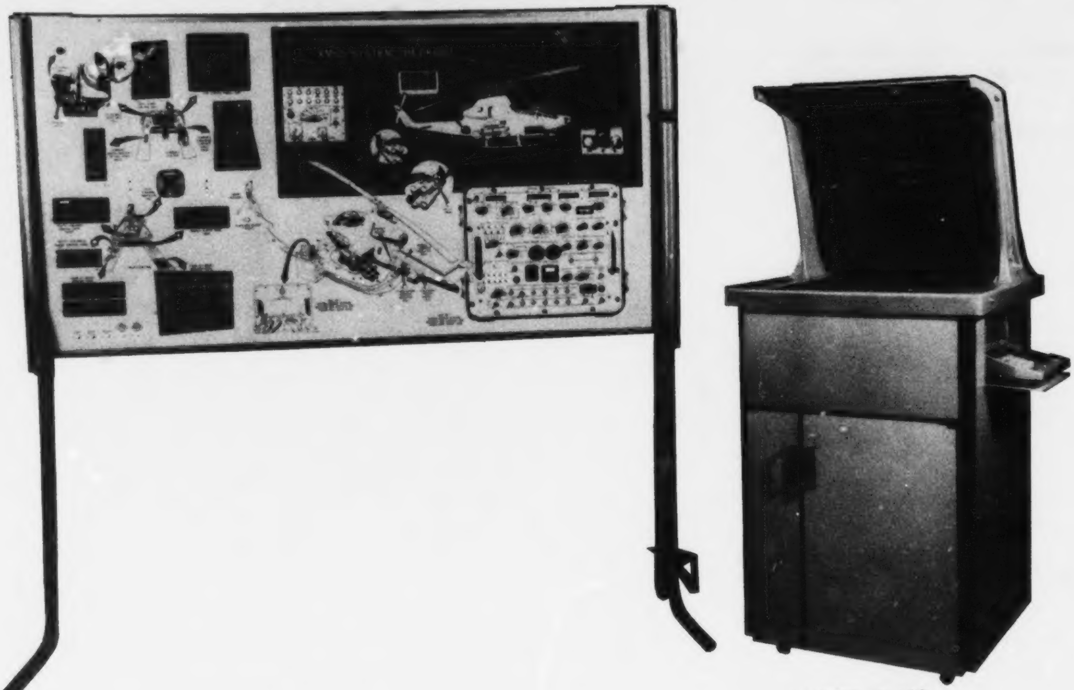
MOSC 68J and 68M

SM 551-68J Tasks

2003	2062	2126	2216
2004	2066	2202	2228
2010	2068	2203	2229
2015	2070	2211	2239

TOW COBRA PROGRAMMABLE TRAINER (CLASSROOM)

DVC 01-123 **NSN 6910-01-063-7535**



DVC NO. 01-123

Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to demonstrate the AH-1S Helicopter electrical and TOW weapon subsystems operation and to teach maintenance personnel troubleshooting and malfunction recognition. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer consists of a panel mainframe in which display panels depicting the M65 TOW System, M128 Helmet Sight Subsystem, M28A1E1 Armament System, and the ac/dc electrical systems can be mounted, and a control console which houses a computer, controls, and a visual system. The trainer displays operation of these systems in both normal and malfunctioning conditions. Fault insertion capabilities are provided and all necessary test equipment for troubleshooting faults are incorporated in the appropriate panels.

Physical Information:
29" x 112" x 72"; 600 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

DVC 01-123

Applicable Publications:
NAVTRADEV P-4330

Reference Publications:
TM 55-1520-236 Series
TM 9-4935-473 Series
TM 9-1270-212-14

Training Requirements Supported:
MOSC 68J and 68M

SM 551-68J Tasks

2003
2004
2010
2015
2062
2066
2068
2070
2126
2202
2203
2211
2216
2228
2229
2239

AH-1S ARMAMENT SYSTEMS MAINTENANCE TRAINER

DVC: 01-124 **NSN 6920-01-105-8710**

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsibility Command, Service Agency:

PM TRADE

Source of Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

Provides a realistic environment for presenting the techniques for rigging and maintenance on all weapon systems of the AH-1 TOW-Cobra Helicopter. The use of operational equipment provides a comprehensive means of instructing disassembly, assembly, and repair of armament control boxes; checking of electrical circuits for voltage and continuity; loading and unloading ammunition; boresighting; general repair and troubleshooting of overall weapon systems. The specific training requirements supported are shown following the descriptive data.

Functional Description:

Pilot's and gunner's controls are installed in their actual locations, but are not moveable. The controls incorporate all switches applicable to the weapon system. The trainer is provided with an M28A1E1 armament subsystem,, which consists of a Universal Turret System XM97E2 (M197). A complete M65 Tow Missile Subsystem, including the Heads Up Display and four two-tube missile launchers, is mounted in the same position as in the actual helicopter. The external stores pylons are mounted on the trainer to accept various combinations of the TOW launchers; the seven-tube, 2.75-inch rocket pod; the 19-tube, 2.75-inch rocket pod; and XM18E1 7.62mm Gun Pod. All components of the weapon system are completely operational and function in the same manner as in the actual helicopter. A 1,500-psi power unit is supplied to furnish the required hydraulic power.

Physical Information:

312" x 126" x 108"; 2,700 lb.

DVC 01-124

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
Trainer and hydraulic power unit: 220 vac, 60 A, 3 phase, 60 cycle.

Applicable Publications:
Operation and Maintenance Manuals for AH-1 and AH-1 Trainers.

Reference Publications:
TM 55-1520-226 Series
TM 9-1425-473 Series
TM 9-1090-206 Series
TM 9-1090-207
TM 9-1090-206-12
TM 9-1090-206-30
TM 4935-473-14-1
TM 4935-473-14-2

Training Requirements Supported:

SM 551-68J Tasks

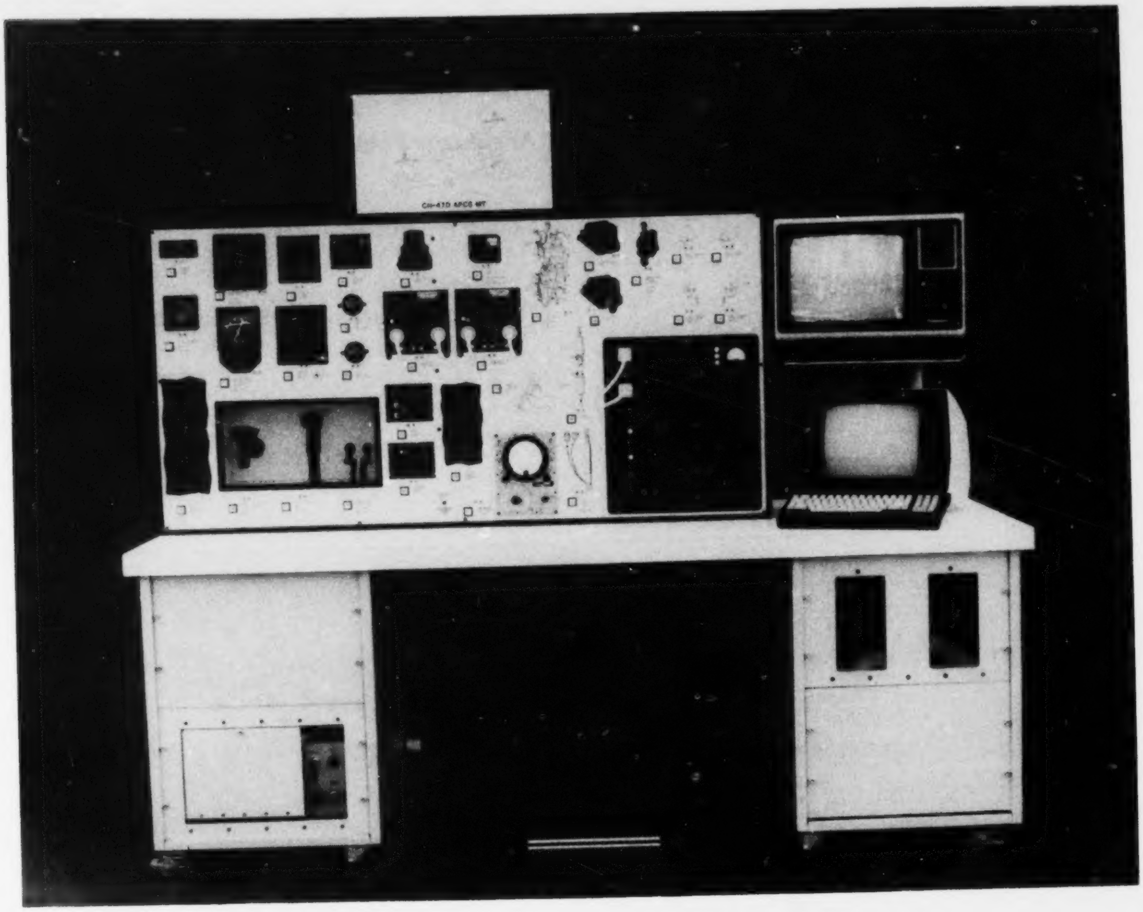
1001	1037	1101	1110
1036	1038		

SM 551-68M Tasks

2022	2046	2136	2198
2024			

CH-47D HELICOPTER AVIONICS MAINTENANCE TRAINER (CLASSROOM)

DVC 01-125 **NSN None**



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:

This trainer is used to teach avionics mechanics to perform operational checks, adjustments, and troubleshooting the subassemblies and components of the CH-47D Advanced Flight Control System.

Functional Description:

This device uses visual display techniques to replicate the CH-47D Advanced Flight Control System and Operational Test Equipment. The use of panel Program controls enables the operator/student to visually inspect components or subsystems, make pressure or electrical readings, and take corrective actions to return the simulated system to normal operation after insertion of a malfunction by the instructor.

The operations described are accomplished through the use of software system modeling, microprocessor control, state-of-the-art LSI circuit based on logic cards and video presentations controlled by the simulation control processor through a video disk-based television monitor display system.

DVC 01-125

Physical Information:

The following major assemblies comprise the Avionics Maintenance Trainer: display panel, console, video disk-based TV display system, CRT terminal, frame structure, and protective cover. Devices 01-125 and 01-126 are similar in appearance; the Classroom Trainer is built to allow viewing from greater distances. It may also be adjusted in height. Both devices are portable and use lockable casters.

Dimensions:

82.5'' high x 96'' wide x 18.5'' thick

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

120 Vac

Applicable Publications:

None

Reference Publications:

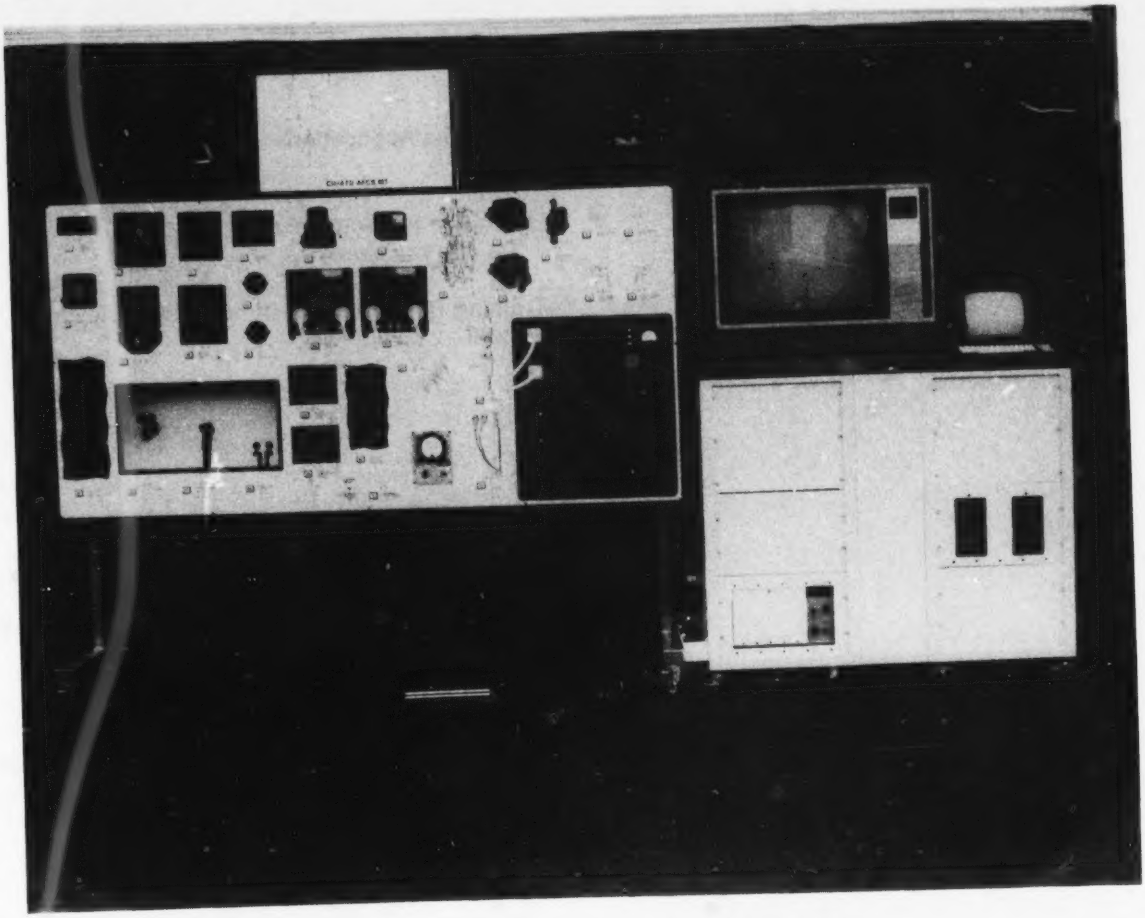
TM 55-1520 Series

Training Requirements Supported:

MOSC 35K and 35M

CH-47D HELICOPTER AVIONICS MAINTENANCE TRAINER (INDIVIDUAL)

DVC 01-126 **NSN None**



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:

This trainer is used to teach avionics mechanics to perform operational checks, adjustments, and troubleshooting the subassemblies and components of the CH-47D Advanced Flight Control System.

Functional Description:

This device uses visual display techniques to replicate the CH-47D Advanced Flight Control System and Operational Test Equipment. The use of panel Program controls enables the operator/student to visually inspect components or subsystems, make pressure or electrical readings, and take corrective actions to return the simulated system to normal operation after insertion of a malfunction by the instructor.

The operations described are accomplished through the use of software system modeling, microprocessor control, state-of-the-art LSI circuit based on logic cards and video presentations controlled by the simulation control processor through a video disk-based television monitor display system.

DVC 01-126

Physical Information:
The following major assemblies comprise the Avionics Maintenance Trainer: display panel, console, video disk-based TV display system, CRT terminal, frame structure, and protective cover. Devices 01-125 and 01-126 are similar in appearance; the Classroom Trainer is built to allow viewing from greater distances. It may also be adjusted in height. Both devices are portable and use lockable casters.

Dimensions:
73" high x 33" wide x 18.5" thick

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
120 V ac

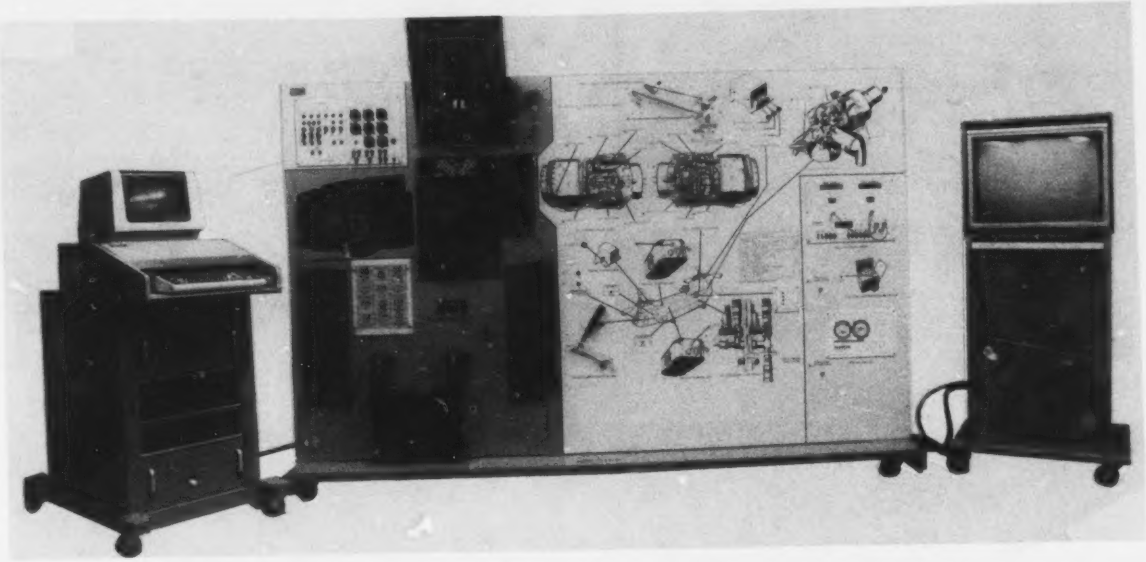
Applicable Publications:
None

Reference Publications:
TM 55-1520 Series

Training Requirements Supported:
MOSC 35K and 35M

CH-47D HELICOPTER POWER PLANT/POWER DRIVE DYNAMIC DISPLAY TRAINER (PPPDDDT)

DVC 01-127 **NSN None**



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This device provides hands-on training to students of the US Army Aviation Transportation School. It teaches mechanics to perform operational checks, adjust, troubleshoot, locate and repair faults in the CH-47D power plant.

Functional Description:
Device 01-127 is an electronic panel trainer which portrays all operations of the T55-L-712 engine and the CH-47D dynamic power drive and their related systems. These systems are displayed or simulated in such a manner that both normal and malfunctioning conditions can be absorbed by avionics mechanics students.

Physical Information:
The trainer consists of:
Instructor's Console: 29.5" x 38.5"
Visual Display: 29.5" x 29.5"
Hardware Display Panel: 118" x 29.5"
The software consists of:
Simulation Program
Daily Readiness Check
Diagnostic Test

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
120 V ac

Applicable Publications:
None

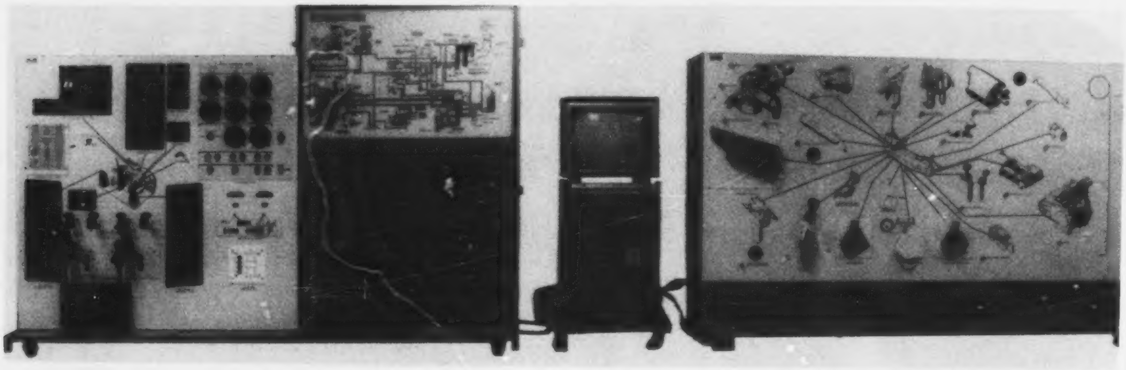
Reference Publications:
TM 55-1520 Series

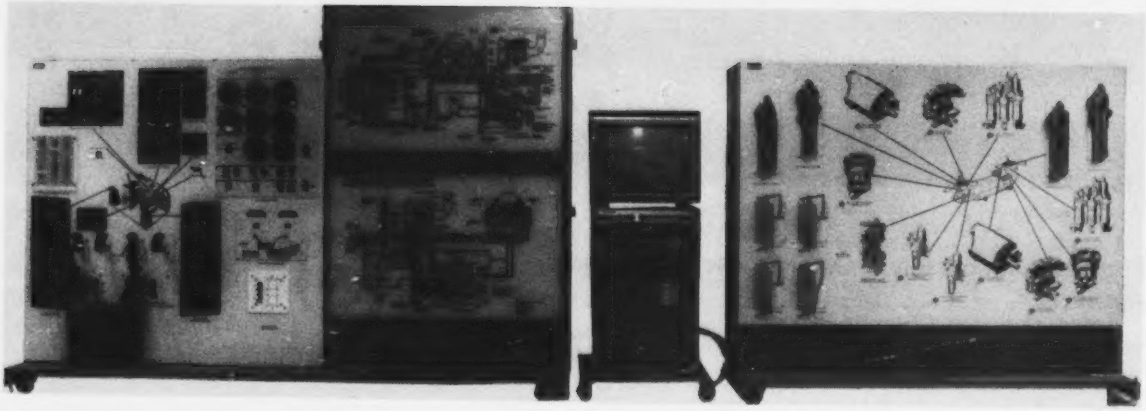
Training Requirements Supported:
SC-71
MOSC 67U
68B
68D
100 C G

CH-47D HELICOPTER FLIGHT CONTROL AND UTILITY HYDRAULIC PANEL TRAINER (FC UHPT)

DVC 01-128

NSN None





Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

This device provides hands-on training to students of the US Army Aviation Transportation School. It teaches mechanics to perform operational checks, adjust, troubleshoot, locate and repair faults in the CH-47D hydraulic system.

Functional Description:

Device 01-128 is an electronic panel trainer which portrays all operations of the Flight Control and Utility Hydraulic systems. It consists of two panels that operate individually or in unison. One panel displays all modules, valves, pump motors, filters, lines, reservoirs, reducers, regulators, accumulators, meters, gages, and servicing facilities. The other panel simulates Flight Control and Utility systems and subsystems. Operation includes logical sequencing of valves and resulting mechanical functions.

DVC 01-128

Physical Information:

The trainer consists of:
  - Two Instructor's Consoles: 29.5'' x 38.5''
  - One Generic Mainframe: 131'' x 29.5''
  - One Visual Display system: 29.5'' x 29.5''
  - One Flight Utility Hydraulic Panel: 90'' x 29.5''

The Software consists of:
  - Simulation Program
  - Daily Readiness Check
  - Diagnostic Test

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

120 V ac

Applicable Publications:

None

Reference Publications:

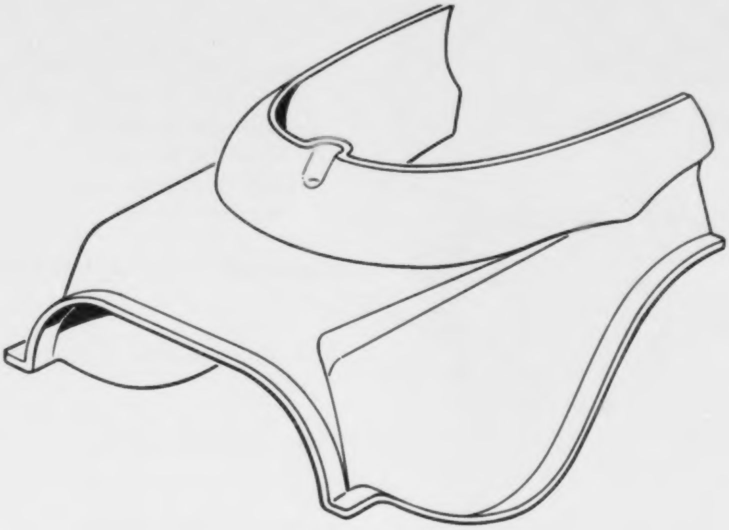
TM 55-1520 Series

Training Requirements Supported:

SC-71
MOSC 67U
  68B
  68D
  100 CG

TRAINING AID BLIND FLYING HOOD: CHANNEL VISION PERSONNEL

DVC 01-130 **NSN: 6910-00-525-8199**



Training Category/Level Utilized:
Aviation/Level 3

Logistic Responsible Command, Service or Agency:
AVSCOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49

Purpose of Trainer:
The trainer is used to teach aviator personnel instrument flying or blind flying in fixed wing aircraft.

Functional Description:
The device is a polystyrene pivotable face shield attached to the aviators crash helmet. When the device is in place it allows the student to view the complete instrument panel but restricts peripheral vision. This restriction to vision is removable by the upward flick of a finger.

Physical Information:
8-1/16'' x 9-3/8'' x 6''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
Not Applicable.

Applicable Publications:
None

Reference Publications:
FM 1-50

Training Requirements Supported:
MOSC 15 and 100

ATMTC 1-135 Tasks

4501	4504	4508	4512
4502	4505	4509	4513

ATMTC 1-136 Tasks

4501	4504	4508	4512
4502	4505	4509	4513

ATMTC 1-137 Tasks

4501	4504	4508	4512
4502	4505	4509	4513

DVC 01-130

ATMTC 1-144 Tasks

4501
4502
4503
4504
4505
4506
4509
4510
4511

ATMTC 1-145 Tasks

4501
4502
4503
4504
4505
4506
4509
4510
4511

CH-47D SINGLE POINT PRESSURE REFUELING SYSTEM TRAINER

DVC 01-134 **NSN: None**

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The trainer is used to depict a realistic operation of the Single Point Pressurized Fuel System in the CH-47D helicopter. This system displays or simulates both normal and malfunctioning conditions that can be observed by the student. Components are arranged as they replicate their position on the CH-47D, using lighting to show fuel paths and direction of flow.

Functional Description:

The Fuel System Trainer is a display panel that schematically depicts the Model HC MK 1 aircraft fuel system. The panel is an animated mechanical and static representation by a back lighting technique, of fuel system components with interconnecting lines. The display will permit portrayal of fuel system flow during pressure refueling, intertank transfer, normal engine feed, and engine crossfeed. The tanks are identified as the forward auxilliary, the main, and the aft auxilliary. The No. 1 engine draws fuel from the port side main tank; the No. 2 engine draws from the starboard side main tank. Controlled colored lighting is used to depict pressure and return fuel flow with the interconnect control circuit functions. The display also depicts the internal functional aspects and operational characteristics of the major units of the fuel system. The system controlled features are interlocked and controlled to depict actual system aircraft system operation in all conditions which are practical.

Physical Information:

102'' long x 34'' wide x 50'' high
Weight 400 lb.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

115 vac, single phase, 60 Hz

Applicable Publications:

None

Reference Publications:

None

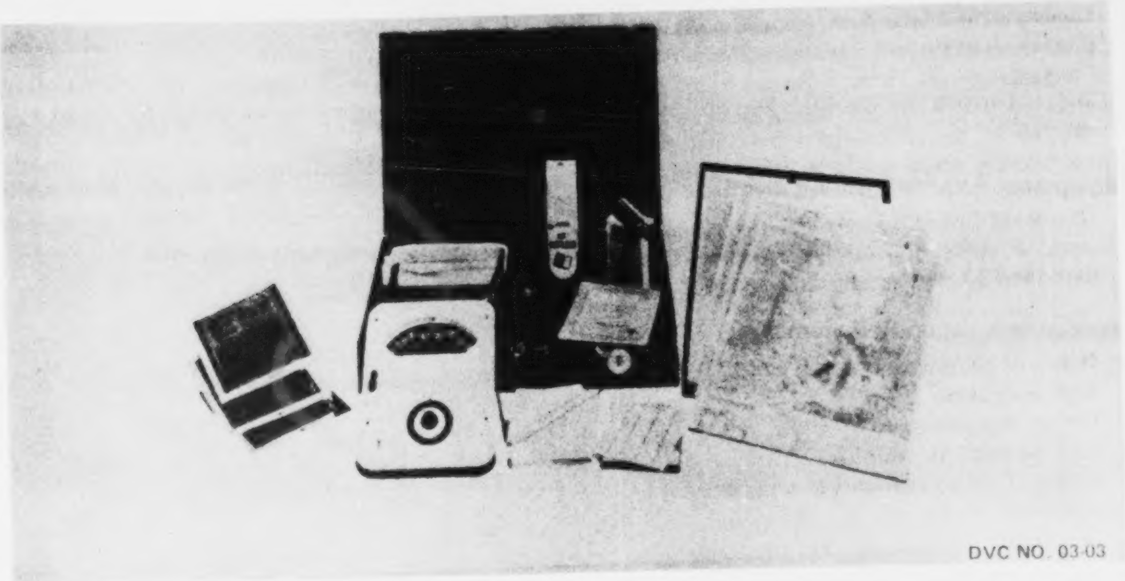
Training Requirements Supported:

MOSC 67U

AERIAL RADIOLOGICAL SURVEY TRAINING SET

DVC 03-03
11F7

NSN None



DVC NO. 03-03

Training Category/Level Utilized:

General/Level 2

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Available through local TASCs.

Purpose of Trainer:

To provide personnel with classroom training, practice, and to maintain proficiency in the techniques of conducting an aerial radiological survey with a minimum of transition between the simulated and real situation, and without the need for aircraft, terrain, or radiation. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The device provides an audiovisual presentation which simulates a radiological survey flight mission following detonation of a nuclear weapon. This portrayal is made by means of (1) a motordriven operable transparency representing an operational radiacmeter (IM-174/PD); and (2) a recorded tape which presents appropriate dialog and helicopter background noises. When animated, the radiacmeter representation shows the different intensities of radiological dosage contamination found at 15-second intervals during each leg of five simulated flight legs.

The operable transparency is to be used with an overhead projector (not furnished).

The device also includes visual casts by means of which the instructor can visually illustrate:

a. Checkpoints
b. Fallout predictions
c. Course legs
d. Air ground correlation factors
e. Order of flying

The Radiological Data Sheet (DA Form 1971-1-R, 1 Jan 63), complete with fallout readings, is also illustrated by a visual cast.

During the simulated flight, students act as radiological monitors and record radiological survey data. The kit includes crayons, rulers, laminated maps, and data sheets.

Realism of the audiovisual presentation gains students' interest, which is held by their participation in the exercise.

The device is used for only a portion of the overall program of radiological survey instruction. Its use is preceded and followed by other instruction.

DVC 03-03

Physical Information:

Animated transparency: 13" x 16" x 2"
Laminated maps: 20" x 28"
Overlay transparencies: 8" x 10"
Carrying case: 31" x 22" x 6"
Weight: Carrying case (packed with all items) approximately 60 lb

Equipment Required, Not Supplied:

Overhead projector
Viewing screen
Tape playback unit

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

NAVEXOS P-2627, Operation and Maintenance Guide for Aerial Radiological Survey Training Kit, Device 11F7.

Reference Publications:

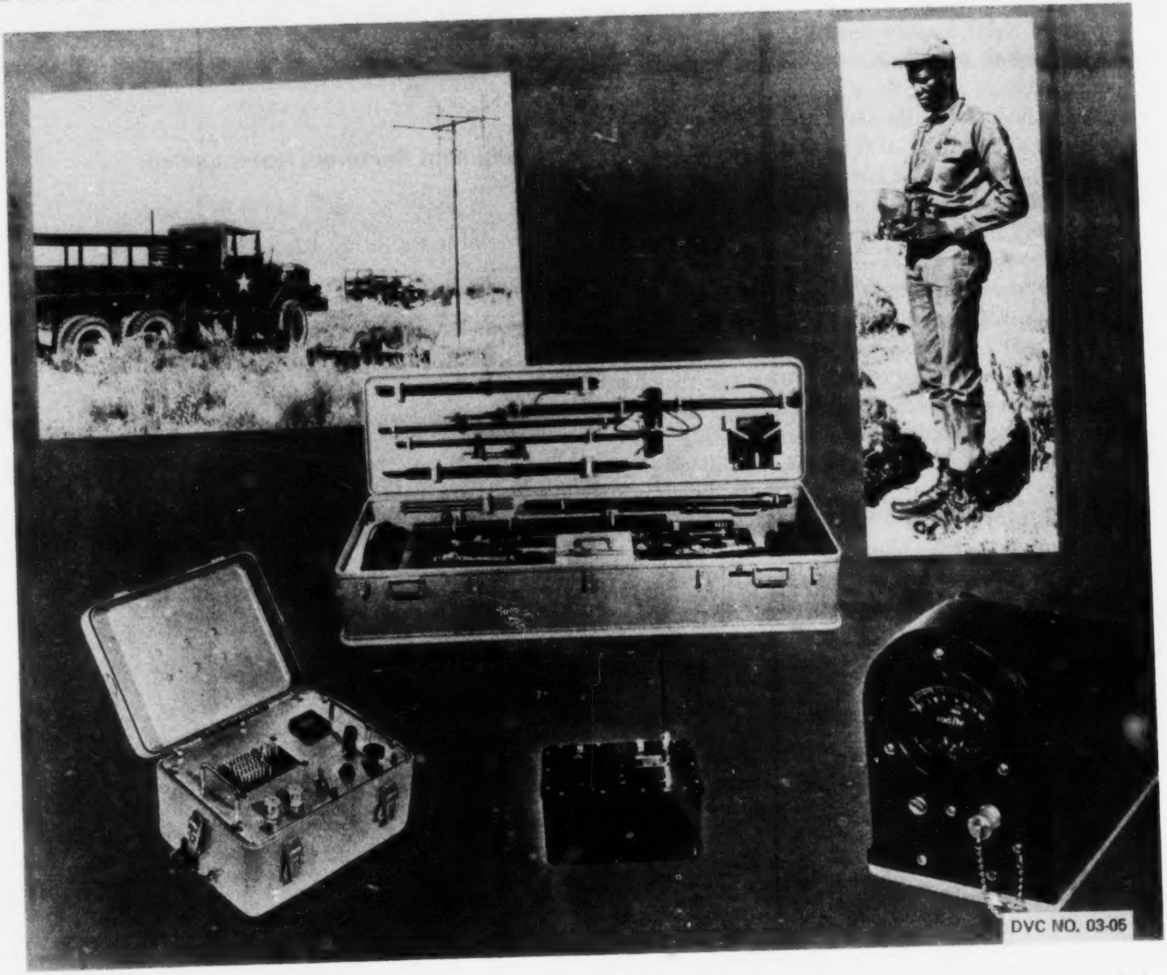
None

Training Requirements Supported:

ARTEP 310-2 Tasks

LARGE AREA RADIAC TRAINER, TDQ-T1

DVC 03-05/1 Simulated Radiac Hot Spot, OT-52/TDQ-1(V)	NSN 6665-00-100-4284
DVC 03-05/2 Simulated Radiac Receiver, OR-114/TDQ-1(V)	NSN 6665-00-081-2219
DVC 03-05/3 Simulated Radiac Transmitter, OT-51/TDQ-(V)	NSN 6665-00-100-4285



DVC NO. 03-05

Training Category/Level Utilized:
Chemical (Radiation)/Level 3

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Available through local TASC's

Purpose of Trainer:

The Large Area Radiac Trainer simulates the functions of Radiacmeter (AN/PDR-56F) to identify and map alpha radiation contamination. In field exercises, it is used to train alpha teams and explosive ordnance disposal teams to operate the Radiacmeter without the use of radioactive material.

Functional Description:

This device replicates the actual Radiacmeter Set; it includes four Simulated Radiac Sets, two Hot Spot Transmitters, and four Point Source Contamination Simulators. It enables Tactical field Commanders to provide practical training for their personnel in their own locale at any time. Trainees may practice all operator tasks with the Main Probe, the Auxilliary Probe, and the

X-Ray Probe; they may hear the same audible clicks through the headset and see the meter respond as does the real Radiacmeter in the presence of radioactive material.

The omni-directional Hot Spot Transmitter simulates an area of alpha contamination by sending RF signals. These are translated to audible clicks and meter readings by the receivers within the Radiacmeter Simulator. The instructor may change the size of the area of contamination from 10 meters to 1000 meters for each transmitter by adjusting the variable attenuators.

The Radiacmeter Simulator has no antenna which could detract from training realism and it is not sensitive to elevation changes or body effects. Realism is enhanced by the use of internal ultrasonic sonars to measure probe height instead of tubes that project from the bottom of the probe. To simulate damage to the Main Probe mylar window, a weatherproof and very sensitive membrane switch has been mounted in the windows of the base of the Main Probe. The device uses state-of-the-art CMOS circuitry.

Physical Information:

Radiacmeter: 6-1/2'' high x 8'' deep x 4-1/2'' wide
Main Probe Simulator: 8.3'' x 4.5'' x 3.5''
(coiled cable: 12'' x 0.5'')
X-Ray Probe Simulator: 9'' long x 2-1/2'' dia.
Auxiliary Probe Simulator: 5.7'' x 2.0''
Emitter Follower: 5.2'' x 2'' (coiled cable: 12'' x 0.5'')
Hot Spot Transmitter: 11.1'' x 5.1'' x 8.8''
Antenna Assembly: 4 sections s 0.75'' x 36''
baseplate: 5.5'' x 6''D
Point Source Contamination Simulator: 0.4'' x 1.75'' x 0.5''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

None

Reference Publications Not Supplied:

TM 11-6665-250-14&P

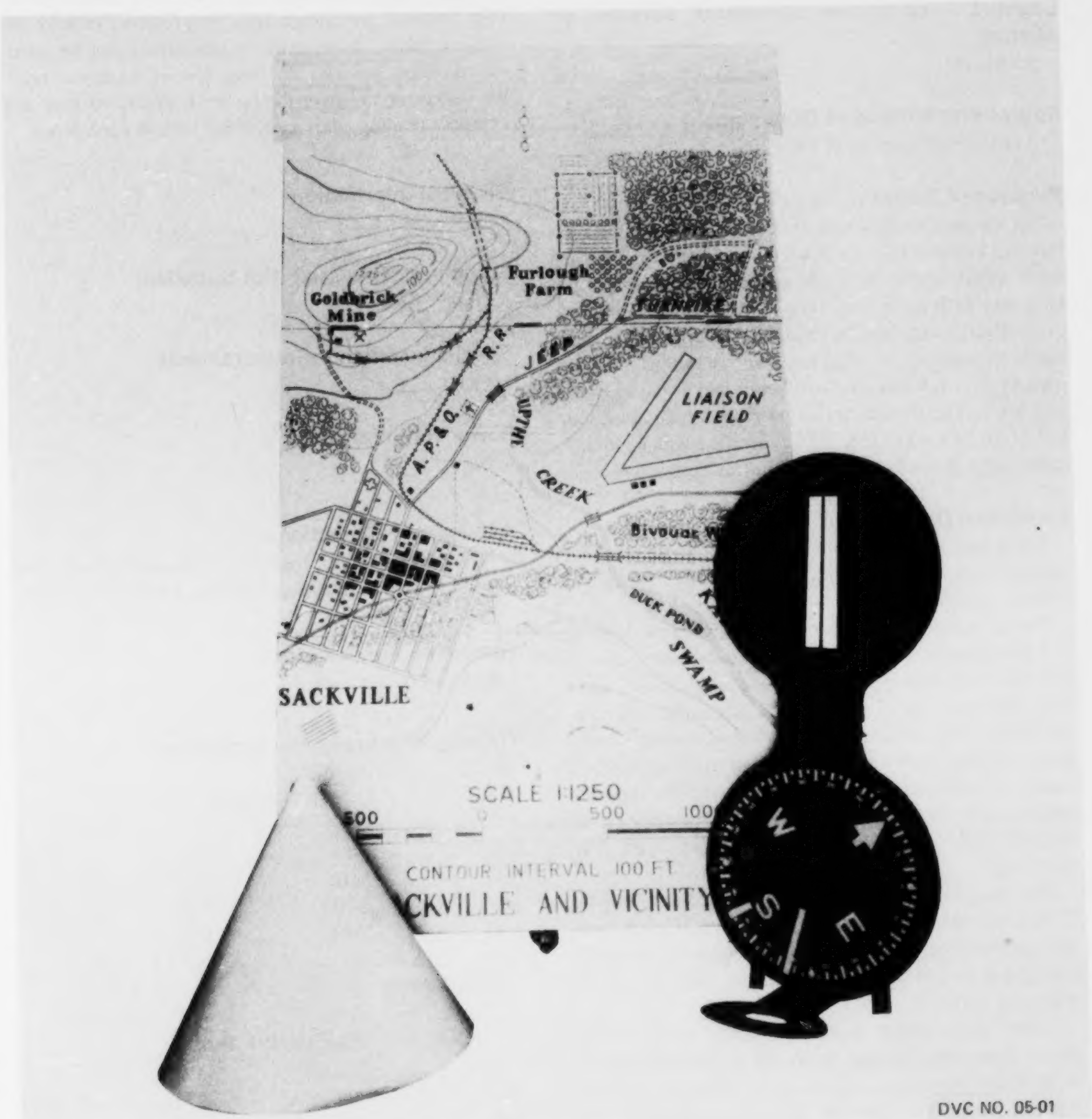
Training Requirements Supported:

None

MAP READING TRAINER

DVC 05-01
11H29

NSN 6910-00-358-1701


Goldbrick Mine
Furlough Farm
TURNPIKE
A. P. & Q. R. R.
JEEP
UPTHE
LIAISON FIELD
CREEK
Bivouac
DUCK POND
SWAMP
SACKVILLE
SCALE 1:1250
500
0
500
100
CONTOUR INTERVAL 100 FT.
CKVILLE AND VICINITY
W
S
E

DVC NO. 05-01

DVC 05-01

Training Category/Level Utilized:
Engineer/Level 3

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:

For use in the classroom to demonstrate principles of map reading and land navigation. The trainer is used to assist the instructor in teaching the basic principles of land navigation with emphasis on appreciation and evaluation, marginal information, topographic map symbols, methods of orientation and resection, and the military grid reference system-beginning at the elementary level. The device can be used in conjunction with FM 21-26 "Map Reading." The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a classroom demonstration panel which displays map material pertinent to the study of map and compass reading.

The device provides a map panel with scales, legend, and grid materials; a protractor with coordinate scale, a grid zone designation panel, a declination diagram, and a contour interval panel. A magnetic, sectionalized, take-apart, three-dimensional hill model representing a topographic formation is an integral part of the map panel. It enables the instructor to illustrate how contour lines are determined by sectioning the terrain. A large-scale reproduction of the lensatic compass is attached to the map panel edge.

The map is a reproduction of part of Sheet 3859IV (Fort Knox, Kentucky), showing the town of West Point and surrounding area. This is the portion of the same map found in FM 21-26. A pointer is included for the instructor's use.

A dull matte screen is also provided, which can be pulled down over the map for movie or slide projection, or on which the instructor can write and erase explanations or diagrams. Crayons and a wipe-off cloth are furnished.

The device visually demonstrates the instructor's lecture. It focuses student attention on important parts of the map without the distraction of unrelated parts, because map features are shown in a progressive, orderly sequence. Ideas, terms, and manipulations can be introduced simply and one at a time. Use of the device helps the instructor to prove the basic simplicity of map and compass reading, thus increasing student confidence.

Physical Information:
83" x 34" x 2"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
NAVEXOS P-2275, Instructor's Guide and Parts Catalog for Training Aid, Map Reading, Device X11H29.

Reference Publications:
FM 21-26

Training Requirements Supported:

ARTEP Tasks

3-3
3-4
3-5
3-23
5-8
5-12
5-13
5-14
5-15
5-16
5-19
5-27
5-28
5-29
5-30

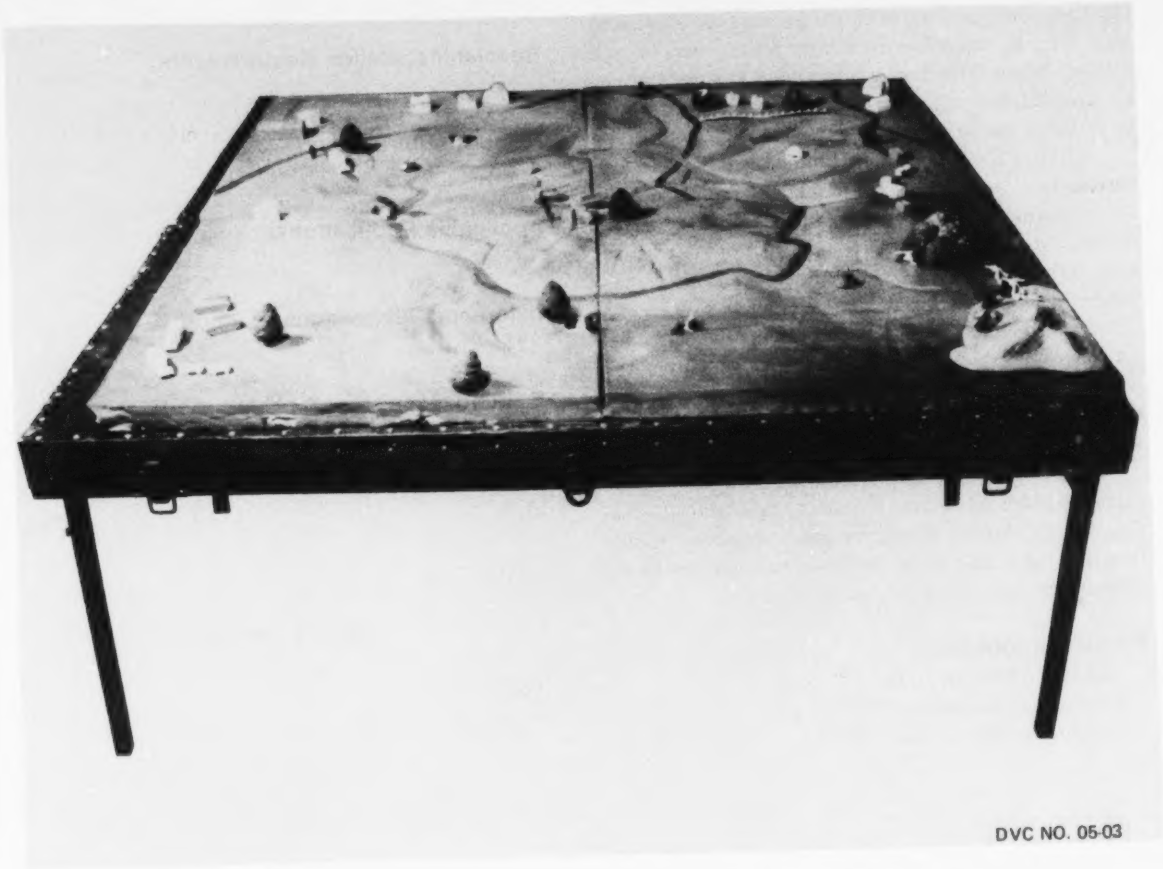
MOSC All

SM 051-191 Tasks

1481
1483
1485
1486
1490
2482
2484
2487
2488
2489
2491
2492

MODEL SET TERRAIN: TRAINING AID W/CHEST

DVC 05-03 **NSN 6910-00-358-1702**



DVC NO. 05-03

Training Category/Level Utilized:

Engineer/Level 3

Logistic Responsible Command, Service, or Agency:

AVSCOM

Source and Method of Obtaining:

Available through local TASCs.

Purpose of Trainer:

For use in the classroom to provide a representative model of terrain sections and strips. The trainer is intended to be used as an aid in the instruction of unit tactics, tactics of the individual soldier, selection of routes, application of map reading principles, reconaissance techniques, terrain appreciation, and similar subjects. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The Terrain Model Kit consists of the following:

a. Chest. The chest is made of two O.D. plywood tabletops, each about 63'' by 32'' with a 4'' apron set flush with the outside edge. The chest is fitted with three disengaging hinges, two draw bolt locks, brackets, and handles. When fitted together to form a chest, a container is formed having a depth of about 7''. This container holds the component parts of the kit. Each half of the chest is divided into two sections. The chest is designed to hold the four base sections and an O.D. covered wooden tray approximately 28'' by 28'' by 3'', which is partitioned to provide storage space for the miniatures and accessories. Each of the two tabletops, or chest sections, is fitted with card-table type aluminum legs. A leg is attached to each of the four corners of each section. When these legs are extended and the sections are inverted, two separate tables are formed, which may be fastened end to end or side by side as desired.

b. Four Base and Eight Hilltop Sections. The four base sections are 30'' by 30''. The eight hilltop sections are of varying sizes and shapes. All of these sections are made of foam rubber with 1/8-inch shell of latex rubber skin, formed and spray-painted to represent mountains, valleys, and general terrain characteristics.

c. Miniatures. The components of the miniatures set consist of vehicles, equipment, personnel, structures, trees, and shrubbery. The miniatures may be arranged on the base and hilltop sections to simulate and illustrate many types of military problems.

d. Accessories. Other accessories may be used to supplement the miniatures in portraying a tactical situation. Users of both minatures and accessories should note that their scale varies and may not conform to the scale of the base and hilltop sections.

Physical Information:

Square model dimensions: 60'' x 60''
Strip model dimensions: 30'' x 120''
Weight, including chest: 125 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
None

Reference Publications:
None

Training Requirements Supported:

ARTEP Tasks

3-3 3-4 3-5 3-23

MOSC All

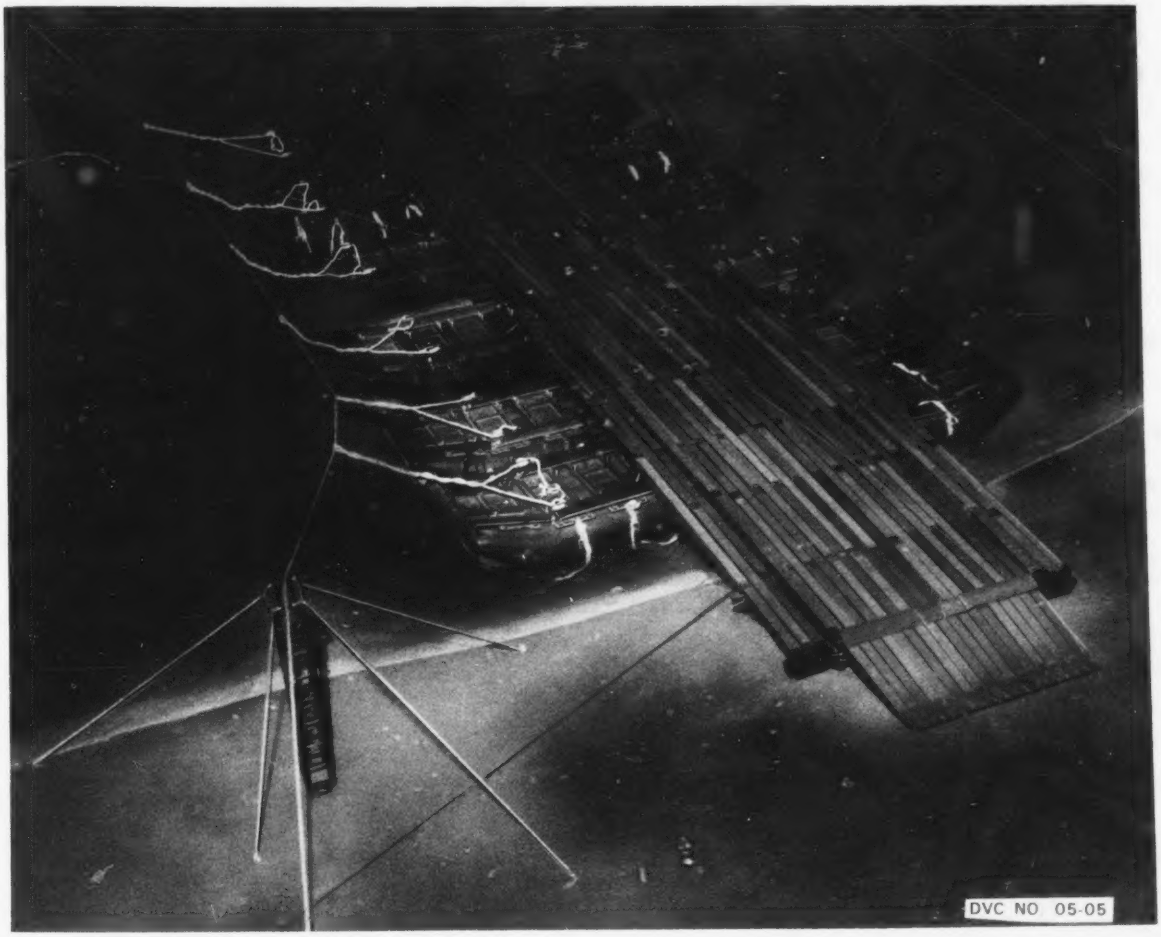
SM 071-329 Tasks

1006

TRAINING AID, MODEL BRIDGE: ALUMINUM DECK BALK SUPERSTRUCTURE PNEUMATIC CLASS M4T6

DVC 05-05 NSN 6910-00-292-9638

DVC 05-05A NSN 6910-00-200-2807



Training Category/Level Utilized:

Engineer/Level 3

Logistic Responsible Command, Service, or Agency:

AVSCOM

Source and Method of Obtaining:

Available through local TASCs.

Purpose of Trainer:

To realistically demonstrate and instruct in the methods of assembling the actual bridge, and to conduct practical exercises in the floating bridge, raft, and deck balk, short-span, fixed-bridge construction. The trainer is to be used for instructing personnel in the construction of all phases of this type of bridge equipment, in the techniques of demolition of assembled and stockpiled floating bridges, and in demonstrating techniques involved in river crossing operations of this type of actual bridge. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a 1:12 scale model of the Pneumatic Float, Aluminum Deck Balk Superstructure Floating Bridge. The model parts correspond closely in general appearance, function, and arrangement to the actual floating bridge. However, the parts are manufactured from different metals; the floats have fewer compartments;

and the connections, especially the safety pins, are larger than scale. Other minor details have been simplified for ease of model fabrication and assembly.

The trainer is capable of representing any one of the following scale model bridge assemblies:

a. One end of a floating bridge consisting of a two-float reinforced end-span and three normal floating buoys.

b. A 5-float reinforced raft, complete with ramps at each end.

c. Deck balk, short span, fixed bridges with one trestle support, representing actual bridge lengths as listed below:

460"	1
360"	2
280"	1

The anchorage features of the actual bridge cannot be represented with the trainer, nor should the bridge model be used for capacity or other physical tests.

Physical Information:

The kit is packed in three chests which are approximately 84" x 19" x 29"; 300 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 5-267K

Reference Publications:

TM 5-210

Training Requirements Supported:

ARTEP Tasks

8-13	10-15	10-18	10-21
10-13	10-16	10-20	

MOSC 12B30, 12B40, 12C30, and 12C40

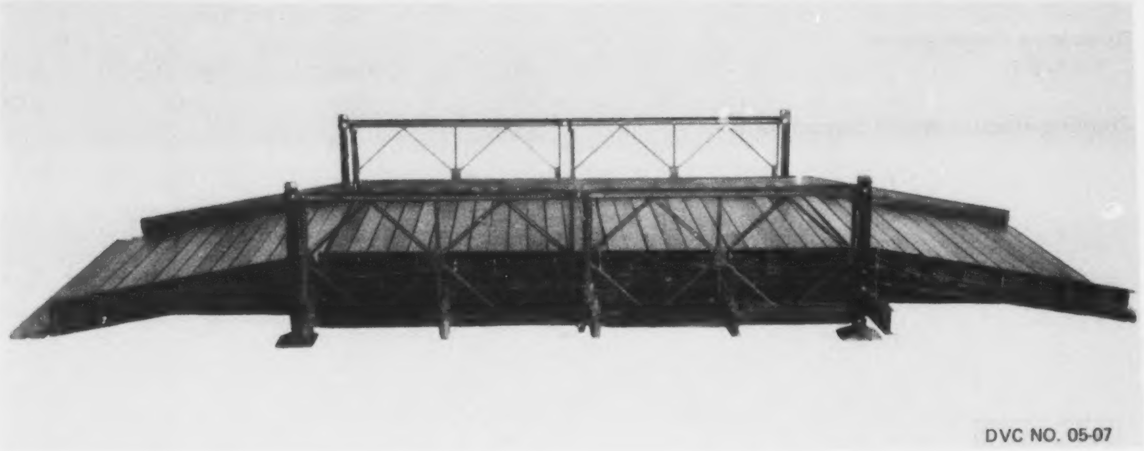
SM 015-198 Tasks

3005	3012	3015	3018
3009	3013	3016	3019
3010	3014	3017	4054
3011			

TRAINING AID, MODEL BRIDGE: BAILEY

DVC 05-07
M2

NSN 6910-00-355-6538



DVC NO. 05-07

Training Category/Level Utilized:

Engineer/Level 3

Logistic Responsible Command, Service, or Agency:

AVSCOM

Source and Method of Obtaining:

Available through local TASCs.

Purpose of Trainer:

To realistically demonstrate the methods of assembling the actual bridge, and for conducting practical exercises in constructing M2 Bailey-Type Bridges. The trainer is intended to be used for instruction in all phases of construction of this type bridge equipment. It can also be used for teaching the techniques of demolition of panel-type bridges and for demonstrating techniques involved in river crossing operations. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a 1:8 scale model of the M2 Bailey-Type Bridge. The trainer provides enough equipment to construct 10 bays (equivalent to 100 feet) of triple-single construction with launching nose; 9 bays (90 feet) of double-double construction; 6 bays (60 feet) of triple-double construction; 8 bays (80 feet) of double-triple construction; and 6 bays (60 feet) of triple-triple construction. Enough additional equipment is supplied to construct 2 bays of ramp. Lengths of the model bridges are restricted by the amount of equipment provided. Assembled model bridges have an overall width of 30'' without the footwalks, and 38'' with them. They vary in length from 15'' to 180'', and in height from 9'' to 27''.

Each bridge model kit is packed in three compartmented chests. A loading plan is located on the inside cover of each chest.

Physical Information:

Chest dimensions: 29'' x 27'' x 12''; 114 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

DVC 05-07

Applicable Publications:
TM 5-277K

Reference Publications:
TM 5-277

Training Requirements Supported:

ARTEP Tasks

8-8
8-9

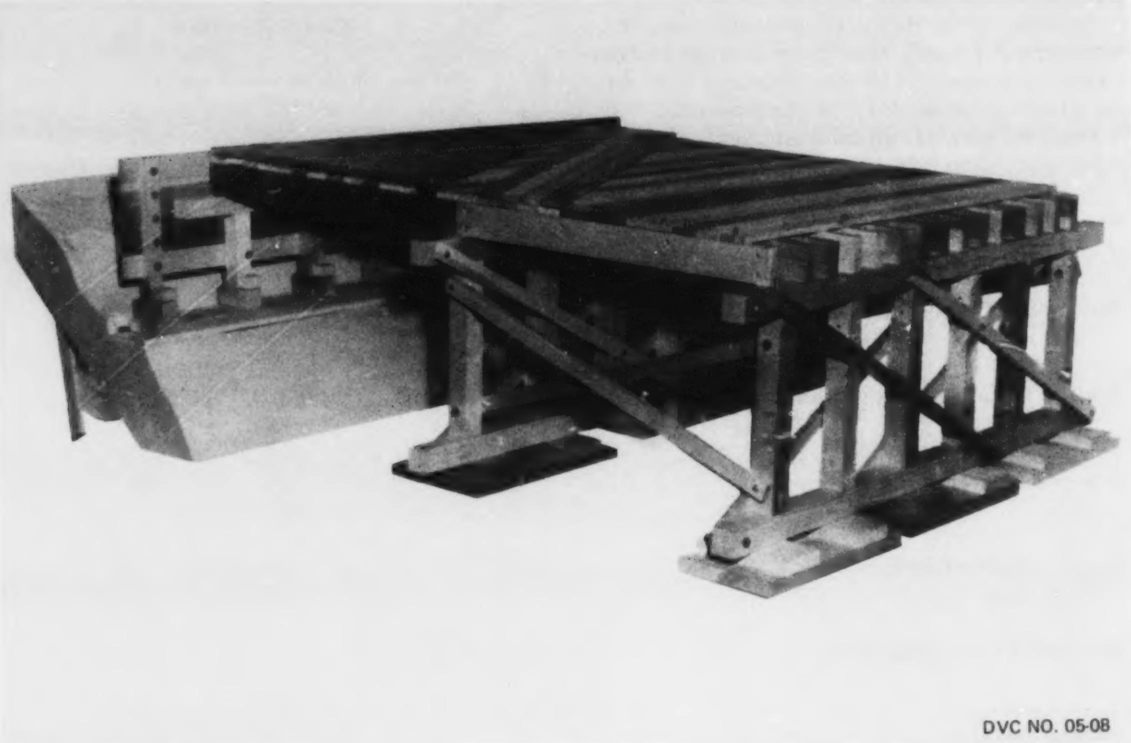
MOSC 12B30, 12B40, 12C30, and 12C40

SM 051-197 Tasks

3006
3007
3008
3009
3010
3011
3012
3013
4028

MODEL BRIDGE: TIMBER-TRESTLE TRAINING AID

DVC 05-08 **NSN 6910-00-355-6539**



Training Category/Level Utilized:
Engineer/Level 3

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:
To realistically demonstrate the methods of assembling the actual bridge, and to conduct practical exercises in constructing Class 50/80 Timber-Trestle Bridges.

The trainer is intended to be used for instruction in all phases of the construction of this type bridge equipment. It can also be used for teaching the techniques of demolition of timber-trestle type bridges and for demonstrating techniques involved in river crossing operations. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is a 1:12 scale model of the Class 50/80 (two-way class 50; one-way class 80) Timber-Trestle Bridge. When erected, its overall dimensions are 136'' long, 34'' wide, and 14'' high. Completely assembled, it consists of nine spans.

DVC 05-08

The major assemblies are two abutments, eight intermediate trestle bents, and the superstructure.

To aid the instructor in his presentation, major components are color-coded. Three large-scale charts, correspondingly color-coded to show construction details of the three major assemblies, are also provided.

Each kit is packed in two compartment chests. A loading plan is located on the inside cover of each chest.

Physical Information:
Chest dimensions: 29" x 27" x 11"; 210 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
TM 5-260K

Reference Publications:
MT 5-312

Training Requirements Supported:

ARTEP Tasks

8-3 8-5

MOSC 12B30 and 12C30

SM 051-196 Tasks

3011 4013

MOSC 12B30

SM 051-197 Tasks

3014 3016 3017 3018
3015

MOSC 12B40

SM 051-196 Tasks

4012

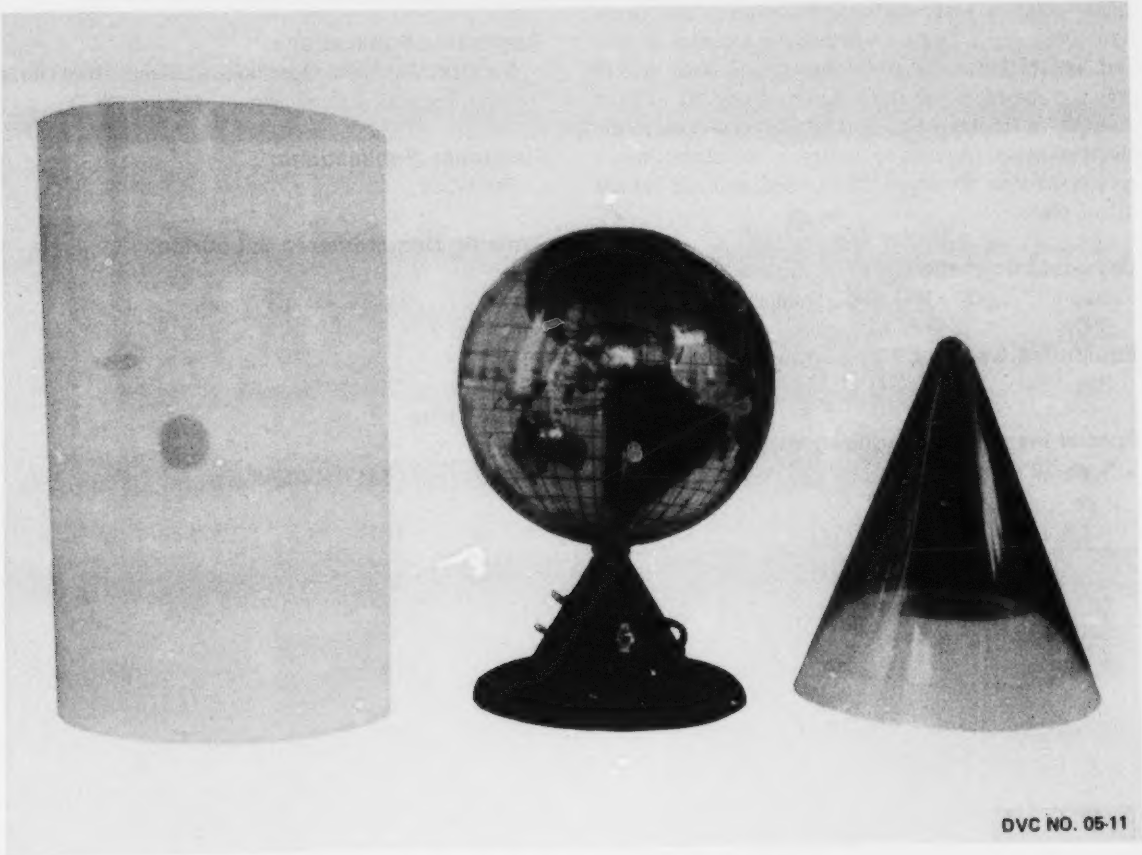
SM 051-197 Tasks

4030

TRAINING AID, MAP PROJECTION DEMONSTRATOR

DVC 05-11
1W3

NSN 6910-00-290-3885


DVC NO. 05-11

Training Category/Level Utilized:
Engineer/Level 2

Logistic Responsible Command, Service, or Agency:
AVSCOM

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:

For classroom use to demonstrate the fundamental principles of map projection in the training of navigation students. The specific training requirements supported are shown following the descriptive data.

Functional Description:

This equipment demonstrates in three dimensions the fundamental principles on which Mercator, transverse Mercator, gnomonic, polar stereographic, conic, secant cone, and polygraphic projections are based.

The earth is represented by a transparent plastic globe. Important land masses, lines of latitude and longitude, and other details are printed on the surface of the globe. A pin-point light inside the globe projects the surface details of the globe on any of several opalescent plastic surfaces, one at a time. Thus, a cone, cylinder, and circular disk are used with the globe to demonstrate various projections. The electric light can be located either in the center of the globe or at the South Pole to demonstrate different projections.

DVC 05-11

Conic projection is shown by placing the cone over the lighted globe. Placing the cylinder around the globe produces either a Mercator's or transverse Mercator's projection, depending on whether the cylinder is held vertically or horizontally. Gnomonic and polar stereographic projections are illustrated by using the circular disk. To relate the plastic surfaces of projection to the charts and maps represented, the images on plastic should be visualized as developed, or unrolled, and laid out flat in one plane.

Physical Information:

Size: 10'' x 10'' x 17''; weight approximately 12 lb

Equipment Required Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

NAVEXOS P-1460, Operation and Maintenance Guide for Map Projection Demonstrator, Device 1W3

Reference Publications:

TM 5-244

Training Requirements Supported:

ARTEP Task

19-40

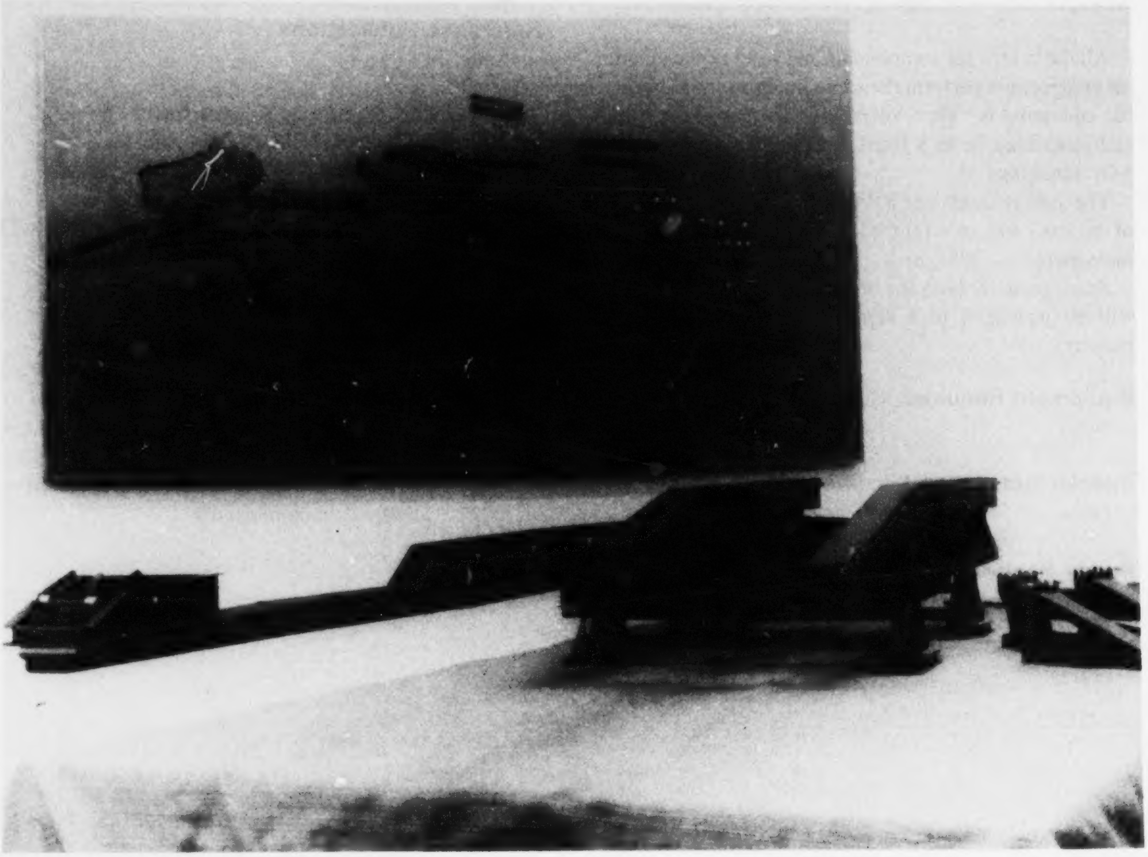
MOSC 81C10

SM 051-257 Tasks

1203 1204

TRAINING SET, MEDIUM GIRDER BRIDGE MODEL 1/12 SCALE

DVC 05-19 **NSN 6910-01-139-4529**



Training Category/Level Utilized:

Engineer/Level 3

Logistic Responsible Command, Service or Agency:

PM TRADE

Source and Method of Obtaining:

Available through local TASCs.

Purpose of Trainer:

The Medium Girder Training Set (MGBTS) will be used as a training vehicle to initially train and then to maintain the functional proficiency of both Active and Reserve Components of the US Army to:

1. Identify the Medium Girder Bridge Components
2. Erect a single and a double story girder bridge.
3. Load and unload Medium Girder Bridge components.
4. Layout bank markings for a single and a double story bridge.
5. Identify the necessary bridge building work parties.
6. Disassemble and assemble single and double story Medium Girder Bridge.

Functional Description:

The MBG Model is a detailed accurate scale model of the US adaptation of the UK Medium Girder Bridge currently being built for delivery into the Army's inventory. The device will be able to be assembled/disassembled in the same manner as the actual bridge. Each model set will consist of a 1:12 scale replication of the single story 5 bay ramp, 4 feet 4 inches in length, or the

DVC 05-19

12 bay double story, 10 feet 10 inches in length with erection set (the same composition as the actual MGB) packaged in both a shipping and storage container.

All the bridge set components and most of the erection set components perform the same functions as their tactical counterparts. The exceptions are that some rollers and jacks may be in a fixed position, rather than being fully functional.

The storage container has doors on both sides for ease of access, and is equipped with handles to facilitate movement.

Spare parts for both the bridge set and the erection set will be packaged in a separate storage/shipping container(s).

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM-5-5420-212-12

Reference Publications:

None

Training Requirements Supported:

ARTEP Tasks

8-21 8-22 8-23

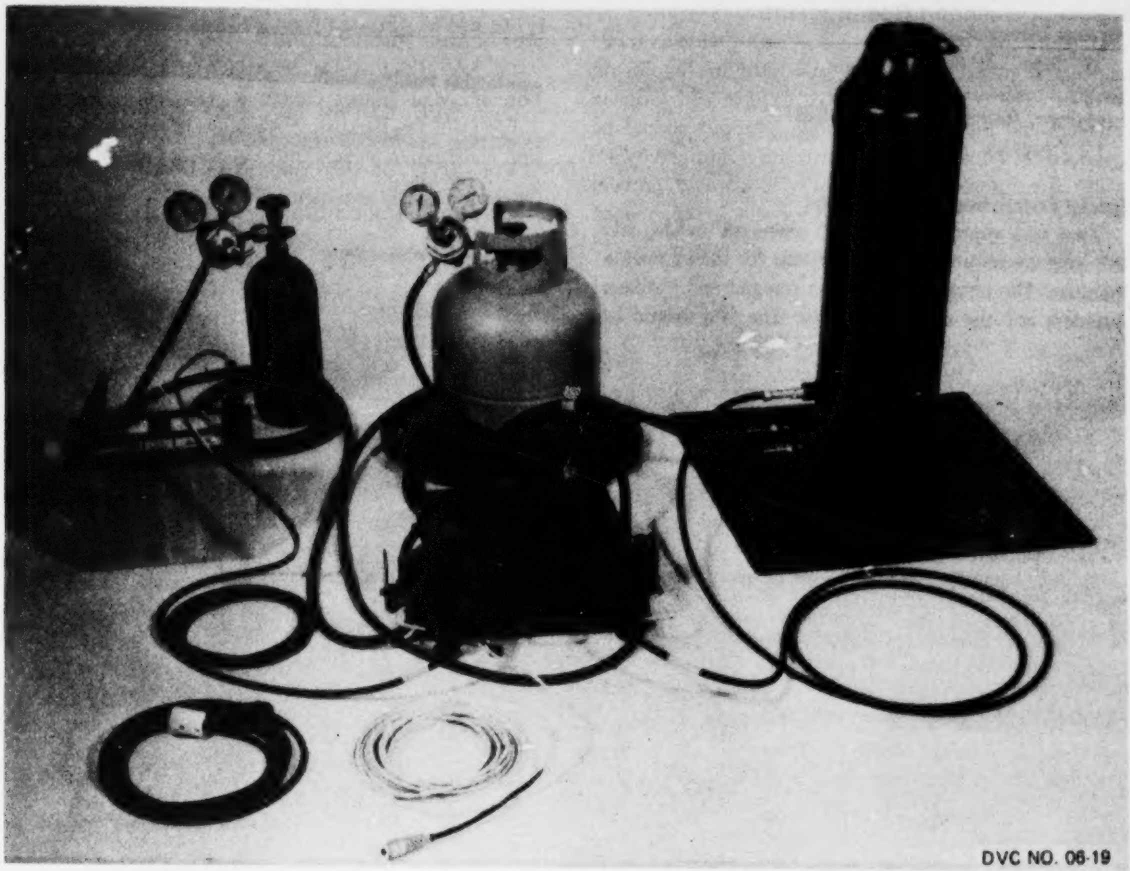
Soldier Manual Task Supported (Individual)

Task No.	*Task Title*
051-197-1019	Identify erection components used to erect a Medium Girder Bridge (MGB).
051-197-1020	Identify Medium Girder Bridge components.

ARTILLERY, MINE, AND DEMOLITION NOISE SIMULATOR

DVC 06-19A **NSN 6920-01-067-1661**

DVC 06-19B **NSN 6920-01-067-1662**



DVC NO. 06-19

Training Category/Level Utilized:

Combat/Level 3

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Available through local TASCs.

Purpose of Trainer:

To provide realistic simulation of common battle noises. Supports general basic training.

Functional Description:

The devices are noise simulators which can be used in all types of combat courses. They can be used to simulate the noise of artillery and mortar fire, demolitions, and mines. They operate on the oxygen-propane principle. Gases are metered through solenoid valves; a timing device causes spark in the gas-filled chamber, causing explosion. It provides a maximum of 6 rounds per minute.

During normal firing, the device is safe at a distance of 25 feet.

Physical Information:

33'' high; 150 lb

DVC 06-19A

Equipment Required, Not Supplied:

12 V battery

Special Installation Requirements:

Two pits approximately 48'' deep, 48'' wide and 48'' long are required. One pit is used for the explosion chamber. The other pit is for the oxygen and propane cylinders and the timing assembly. The pits should be separated by at least 1 foot of earth and reinforced by 4'' by 4'' corner posts with 2'' by 6'' sideboards to prevent the walls from collapsing due to the shock experienced when the device is detonated.

Power Requirements:

The device requires 110 vac, single-phase, 60 cycle. It can also be operated from a 12 vdc battery.

Applicable Publications:

For DVC 06-19A use: NAVTRADEV P-4652, Operation and Maintenance Guide.

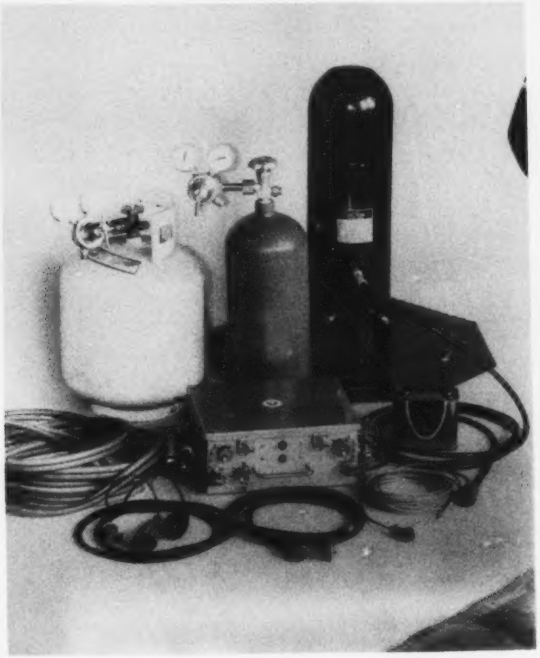
For DVC 06-19B use: NAVTRADEV P-4649, Operation and Maintenance Guide.

Reference Publications:

None

ARTILLERY, MINE, AND DEMOLITION NOISE SIMULATOR

DVC 06-19C **NSN 6920-01-120-3405**



Training Category/Level Utilized:
Combat/Level 3

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Available through local TASCs.

Physical Information:
Firing Chamber Assembly: 24'' x 24'' x 32½'' high. Timing Box: 18'' x 13'' x 5½'' high. Total Weight: 125 lbs.

Purpose of Trainer:
To provide realistic simulation of common battle noises. Supports general basic training.

Functional Description:
The devices are noise simulators which can be used in all types of combat courses. They can be used to simulate the noise of artillery and mortar fire, demolition, and mines instead of high explosives in demolition pits. The device operates on the oxygen-propane principle with gases metered through solenoid valves with a timing device initiating a spark in the gas filled chamber to cause the explosion. A remote trigger switch is used to fire the device from a remote location and it can fire a single shot or a sequence of six shots at 10 second intervals.

During normal firing, the device is safe at a distance of 10 feet.

Equipment Required, Not Supplied:
12V Battery

Power Requirements:
The device requires 110VAC, single-phased, 60 cycle. It can also be operated from a 120VDC battery.

Special Installation Requirements:
Two pits approximately 48'' deep, 48'' wide, and 48'' long are required. One pit is used for the explosion chamber. The other pit is for the oxygen and propane cylinders and the timing assembly. The pits should be separated by at least one foot of earth and reinforced by 4'' x 4'' corner posts with 2'' x 6'' sideboards to prevent the walls from collapsing due to the shock experienced when the device is detonated.

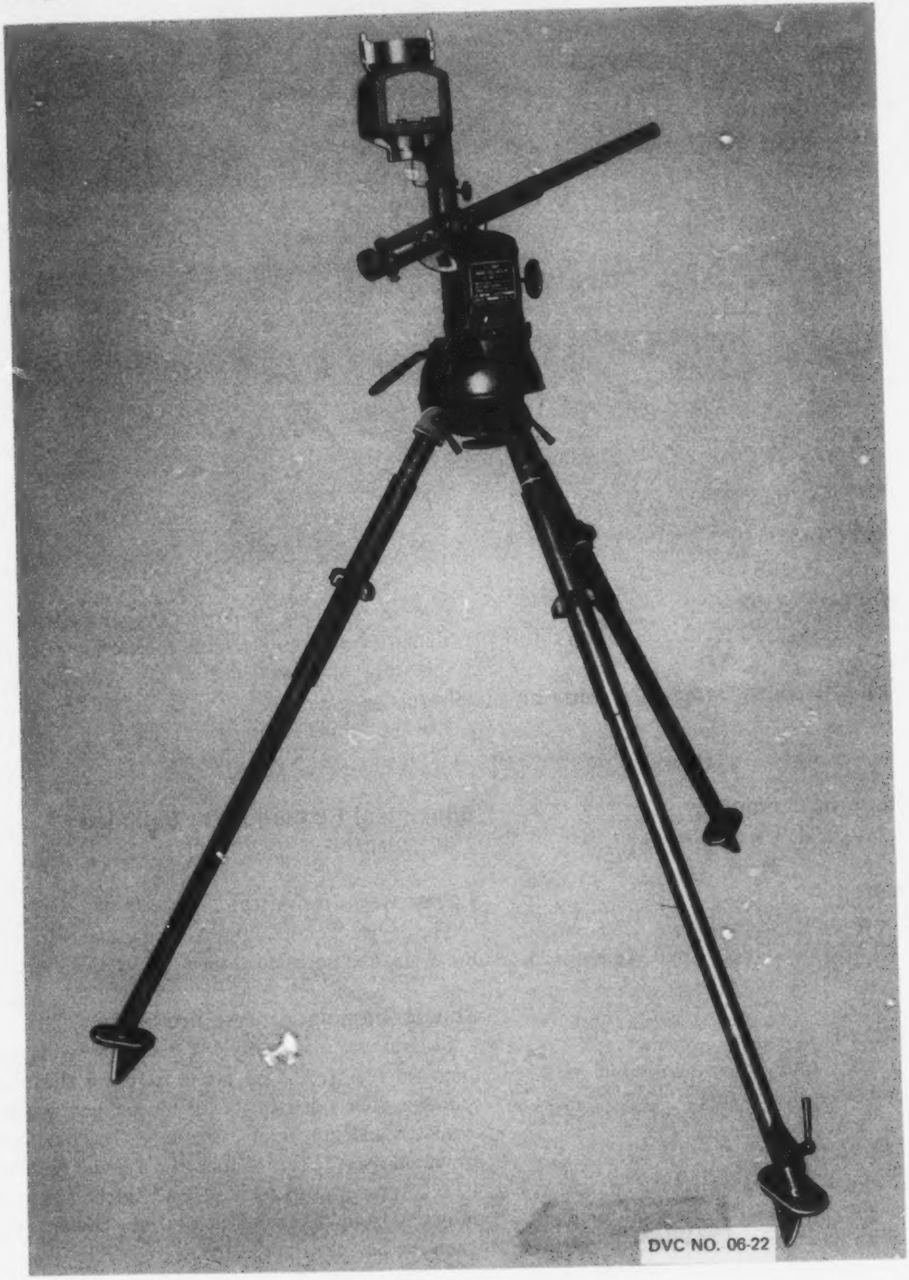
Applicable Publications:
NAVTRADEV P-4909, Operation and Maintenance Guide

FIELD ARTILLERY TRAINER, 14.5 MM

DVC 06-22
M31

NSN 6920-00-603-9301

DVC 06-22A
through K



DVC 06-22

Training Category/Level Utilized:

Field Artillery/Level 3

Logistic Responsible Command, Service, or Agency:

AMCCOM

Source and Method of Obtaining:

Available through local TASCs.

Purpose of Trainer:

To realistically simulate field artillery fire by firing a projectile that ignites and produces an audible report, a puff of smoke, which is visible for 1,000 meters in daylight, and a flash of light, which is visible for several kilometers at night. The trainer is intended for use in training gunners, fire direction personnel, and forward observers. The trainer contributes to effective wire and radio communications training, and can also be used to train gun crews when mounted on tube. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a bolt-action, single-shot, rifled barrel assembly, a mount assembly, a telescope socket, a tripod mount, and adapters to mount the barrel assembly concentrically inside the howitzer tube chambers.

The barrel assembly consists of a barrel trunnion and receiver assembly, a breech bolt group, a safety, and an elevating gear sector. The top portion of the barrel has a flat machined surface for use with a fire-control quadrant for laying the trainer for elevation when using the tripod mount.

The mount assembly consists of the upper (rotating) mount and fixed-base mount which contain the elevating and traversing gears. Attached to the upper (rotating) mount assembly is a telescope socket bracket. The telescope socket assembly is used for mounting the M12 Series Panoramic Telescope.

The tripod mount assembly consists of a tripod base with adjustable legs. The rear extension leg can be extended 15 inches more than the two front legs for greater stability during firing.

The M31 Field Artillery Trainer, NSN 6920-00-603-9301, is a component in the following kits, each of which services a complete artillery battery:

a. DVC 06-22A, NSN 6920-00-295-8114, M102/M108 How

b. DVC 06-22B, NSN 6920-00-295-8115, M109 How Family

c. DVC 06-22C, NSN 6920-00-295-8116, M110 How Family

d. DVC 06-22D, NSN 6920-00-295-8117, M101A1 How

e. DVC 06-22E, NSN 6920-00-295-8118, M114 How Family

f. DVC 06-22F, NSN 6920-00-295-8119, M114/M110 How (Composite)

g. DVC 06-22G, NSN 6920-00-295-8120, M101/M114 How (Composite)

h. DVC 06-22H, NSN 6920-00-295-8121, US Military Academy

i. DVC 06-22J, NSN 6920-00-295-8126, US Army Infantry School

j. DVC 06-22K, NSN 6920-00-295-8127, US Army Field Artillery School

Physical Information:

20'' long x 8'' diameter; 30 lb

Equipment Required, Not Supplied:

Ammunition—fixed round, 14.5mm cartridge

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-6920-221 Series
TM 9-6920-361-13 & P

Reference Publications:

None

Training Requirements Supported:

ARTEP 6-365 Tasks (FO)

6 7 11 14

ARTEP 6-365 Tasks (Communications)

8 11 13

DVC 06-22

ARTEP 6-365 Tasks (FA Btry Hq)

16
17
18
19
20
21
22
23
24
25
27
29
30
33
34
35
41
42

ARTEP 6-365 Tasks (Bn FDC)

5
6
7
8
9
12
13
16
17
18
20
21
22
23
24
25
27

ARTEP 6-365 Tasks (FA Bn Delivery of Fire)

1
2
3
4
7
8
9
10
11
12
13
18
19
20
21
22
23
24
25
26

ARTEP 6-365 Tasks (FA Bn Delivery of Fires)

1
2
3
4
5
6
8
10
11
12
13
15
16
17

SM 061-280 Tasks

1000
1001
1002
1003
1005
1006
1007
1100
1101
1102
1200
1201
1300
1400
1402
2000
2100
2101
2102
2103
2105
2140
2300
2302
2303
2305
2306
2344
2400
2401
2402
2700
2701
2703

SM 061-281 Tasks

1000
1001
1002
1003
1100
1101
1102
1103
1300
1301
1302
1600
2100
2101
2102
2300
2301
2302
2343

SM 061-283 Tasks

1001
1002
1003
1004
1005
1011
1012
1052
2001
2002
2003
2005
2101
2103
2201

SM 061-284 Task

2106

MOSC 13B, 13E, and 13F

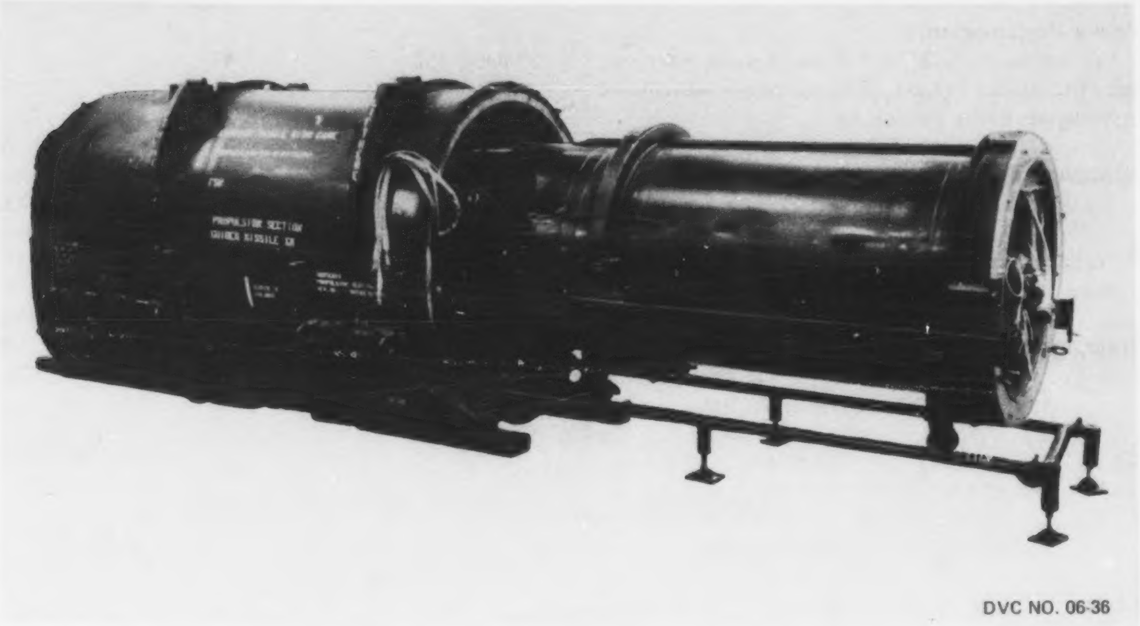
SM 061-279 Tasks

6001
6002

TRAINING SET, GUIDED MISSILE SYSTEM: (PERSHING)

DVC 06-36
XM61

NSN 6920-00-967-9727



DVC NO. 06-36

Training Category/Level Utilized:

Field Artillery/Level 1

Logistic Responsible Command, Service, or Agency:

MICOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To train students in checkout and countdown procedures for proficiency in handling and mating the missile sections of the PERSHING Guided Missile System.

Functional Description:

The missile trainer, XM61, consists of the following sections: first stage body section, XM89; second stage body section, XM90; guidance and control body section, XM91; and the training nuclear warhead section, XM95.

A malfunction setter is used to insert indications of failure into the programmer-test station. Nine interconnecting cable assemblies tie in the malfunction setter into the system. A headset-microphone provides communications between the malfunction setter and the PERSHING Field Artillery Guided Missile System. Also included in the tactical set are the erector-launcher and the power station. The specific training requirements supported are shown following the descriptive data.

Physical Information:

The first stage body section is 40 inches in diameter, 112 inches long, and weighs 5,400 pounds. The second stage body section is 40 inches in diameter, 105 inches long, and weighs 3,620 pounds. The guidance and control section is 40 inches in diameter at one end and 30 inches at the opposite end, 52 inches long, and weighs 530 pounds.

The malfunction control box and base of the malfunction setter are each 24 inches long, 24 inches wide, and 22 inches high. The malfunction setter weighs approximately 75 pounds.

Equipment Required, Not Supplied:

None

DVC 06-36

Special Installation Requirements:

None

Power Requirements:

External sources of 28 vdc, 26 vac, 3-phase, 400 cycle; and 110/220 vac, 3-phase, 400 cycle power are required for operation of the training set.

Applicable Publications:

TM 9-6920-375 Series

Reference Publications:

None

Training Requirements Supported:

ARTEP 6-615 Tasks (Firing Plt/Btry)

3-I-5-6
3-I-5-7
3-I-5-14
3-I-5-15
3-I-5-16
3-I-5-17
3-I-5-18
3-I-5-19

ARTEP 6-615 Tasks (Bn Ammo Plt)

3-I-18-1
3-I-18-2
3-I-18-3
3-I-18-4
3-I-18-7
3-I-18-8
3-I-18-9
3-I-18-10

ARTEP 9-59 Tasks

27
29

MOSC 15E

SM 061-15E Tasks

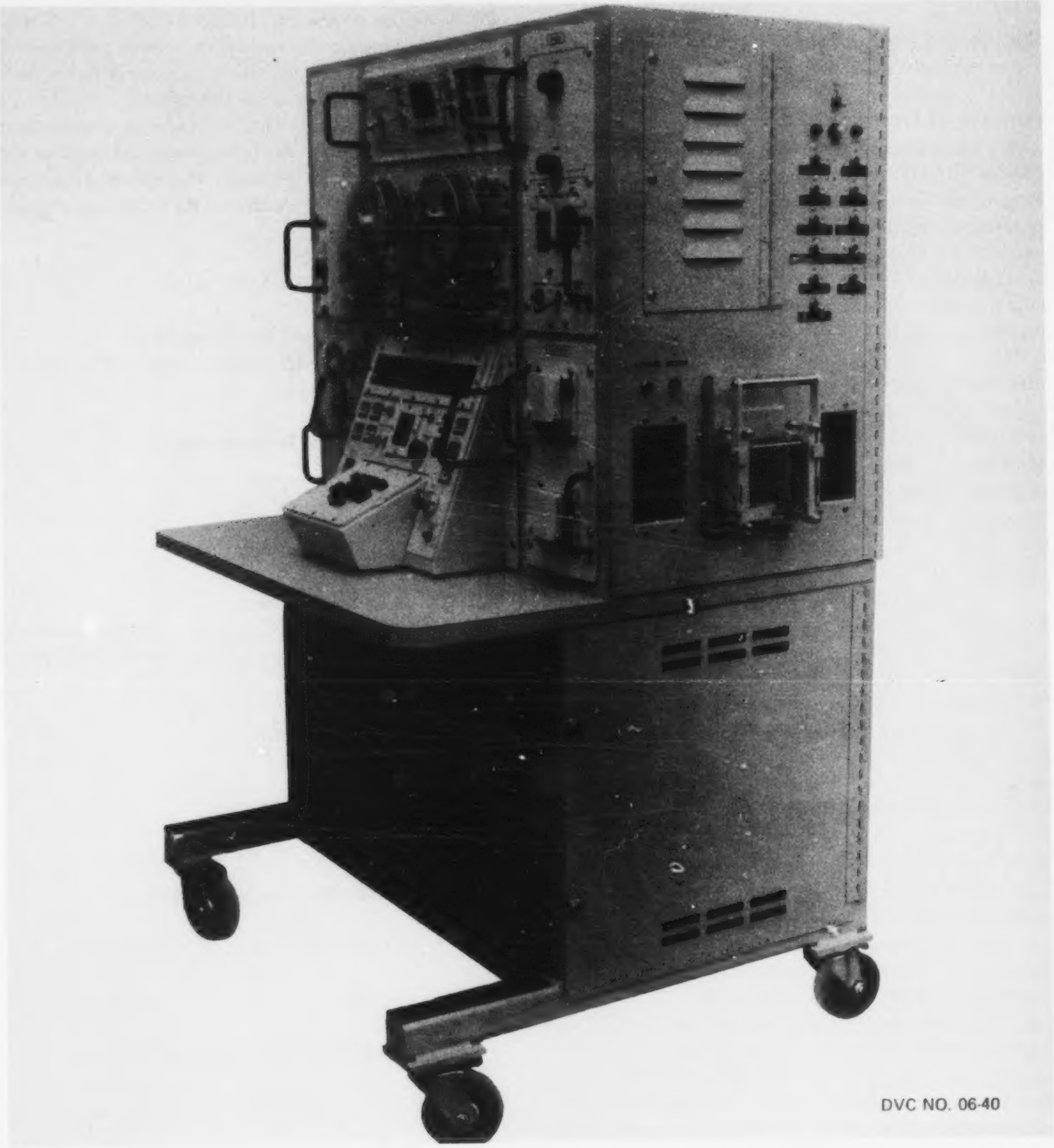
5001
5002
5003
5004
5005
5006
5007
5008
5009
5010
5011
5012
5013
5014
5015
5019
5020
5021
5037
5042
5043
5044
5045
5255
5259

MOSC 21L

PROGRAMMER-TEST STATION OPERATOR CONSOLE TRAINER

DVC 06-40
TR-1B

NSN 6920-01-067-1668



DVC 06-40

Training Category/Level Utilized:
Field Artillery/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
Provides a means for personnel to develop correct procedural habits in the operation and maintenance of the Programmer-Test Station Operator Console. The trainer is intended for classroom use in the support and maintenance of the Programmer-Test Station, a component of the PERSHING Field Artillery Missile System. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is mounted on casters and contains an azimuth laying control panel, voltage-phone monitor panel, maintenance panel, tape readers, countdown control panel, utility panel, teleprinter, and an instructor's control panel. It also contains two power supplies, a storage area, and a remote firing box. These panels simulate the following actions:

a. The azimuth panel contains controls and indicators that simulate azimuth laying functions.

b. The voltage-phone monitor panel contains a meter that simulates monitoring all of the internal Programmer-Test Station (PTS) power supply voltages.

c. An indicator that simulates monitoring the primary ac and dc power, and a switch to inhibit dc power. The lower portion of the panel contains dummy controls and connectors for communication.

d. The maintenance panel contains controls and indicators that simulate troubleshooting the computer.

e. The tape reader contains controls and indicators to simulate entering the tape programs into the computer.

f. The countdown control panel contains controls and indicators for manually entering data, displaying information, and sequencing the firing cycle.

g. The utility panel contains controls that regulate the brightness of the PTS shelter lights, a control to regulate the brightness of the console panel lights, an 8-day clock, three dummy elapsed-time meters, a dummy horn switch, and indicators which light to simulate computer overheating.

h. The teleprinter is a nonfunctional dummy panel.

i. The instructor's control panel contains the master power switch, power indicators, a card reader, and 11 switches that are used to program the trainer. The panel contains two power supplies; a 28-volt, 10 ampere, unregulated dc power supply in the lower right section; and a second power supply consisting of a 3.6-volt, 10-ampere, regulated, modular dc power pack, and a 180-volt, 0.36-ampere, regulated, modular dc power pack which is located in the lower left section.

j. The remote firing box provides the controls and indicators that initiate the firing phase and indicate the firing sequence is progressing. The remote firing box contains a switch that terminates the firing sequence.

Physical Information:
Console: 36'' x 21'' x 53''; 360 lb

Equipment Required, Not Supplied:
NAVTRADEV P-3420, dated January 1969, tables 1 and 2, pages 1-4, 1-5, and 1-6

Special Installation Requirements:
None

Power Requirements:
110 vac, single-phase, 60 cycle

Applicable Publications:
NAVTRADEV P-3420, Operation and Maintenance Instructions for the Operator Console Trainer IPTS, dated January 1969

Reference Publications:
TM 9-1425-382 Series
TM 9-1427-380-12/1
TM 9-4935-385-14/3
TM 9-1425-381-10

Training Requirements Supported:

ARTEP 6-615 Tasks (Firing Plt/Btry)

3-I-5-10 3-I-5-11

ARTEP 6-615 Tasks (Tactical Op)

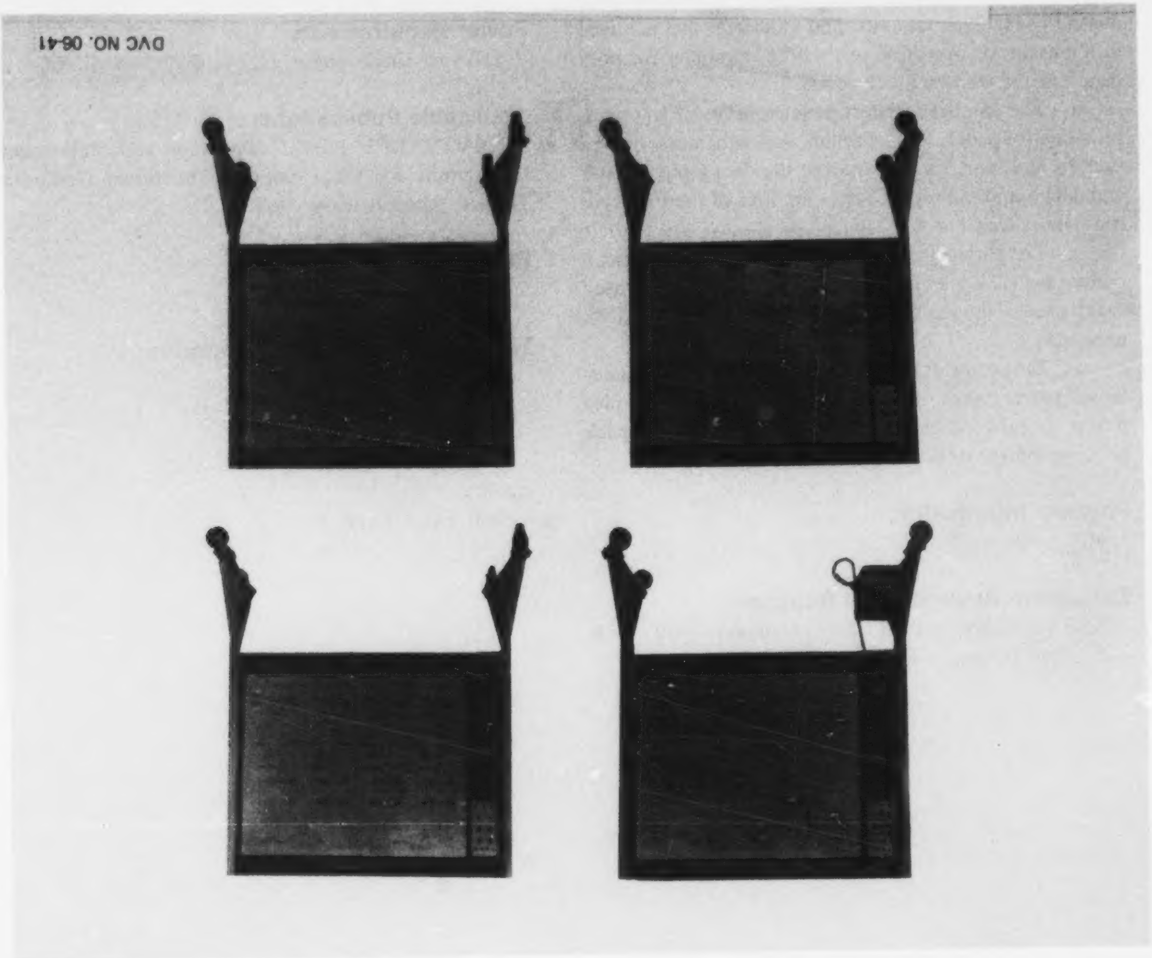
3-11-3-14

MOSC 15E

PROGRAMMER-TEST STATION COMPUTER FUNCTIONAL OPERATION TRAINER

DVC 06-41
TR-4

NSN 6920-01-067-1669



Training Category/Level Utilized:
Field Artillery/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to provide a means for personnel to develop correct procedural habits in the principles of operation, operating instructions, and maintenance of the Programmer-Test Station. The trainer provides the means for demonstrating the physical and functional characteristics of the input/output, core memory, parallel registers, and parallel adder circuits of the Programmer-Test Station Computer. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of four panels mounted on movable stands, a power supply, and eight cable assemblies. The demonstrator may be operated individually or collectively by use of the interconnecting cables. These panels simulate the following actions:

a. The input/output panel consists of an operator's control panel, logic circuits, and indicators that are used to represent the operation of the Programmer-Test Station (PTS) console keyboard, tape reader, teleprinter, data input multiplex, and output register.

b. The core memory panel consists of an operator's control panel, logic circuits, and indicators that are used to represent the operation of the PTS computer memory data register, and memory cores.

c. The parallel registers panel consists of an operator's control panel, logic circuits, and indicators that are used to represent the operation of the data input register and data output multiplex subassemblies of the PTS central data processing.

d. The parallel adder panel consists of an operator's control panel, logic circuits, and indicators that are used to represent the operation of the adder circuits in the PTS computer.

e. The power supply consists of two regulated modular dc power packs. A 28-volt dc power pack provides power to light indicators. The 3.6-volt dc power pack provides power to the simulated logic circuits.

Physical Information:

48" x 60" x 72"; 150 lb

Equipment Required, Not Supplied:

NAVTRADEV P-3421, dated January 1969, table 1-2, pages 1-3 and 1-4

Special Installation Requirements:

None

Power Requirements:

110 vac, single-phase, 60 cycle

Applicable Publications:

NAVTRADEV P-3421, Operation and Maintenance Instructions for the Computer Functional Operations Trainer, dated January 1969

Reference Publications:

TM 9-1425-382 Series

Training Requirements Supported:

SM 6-21G Tasks

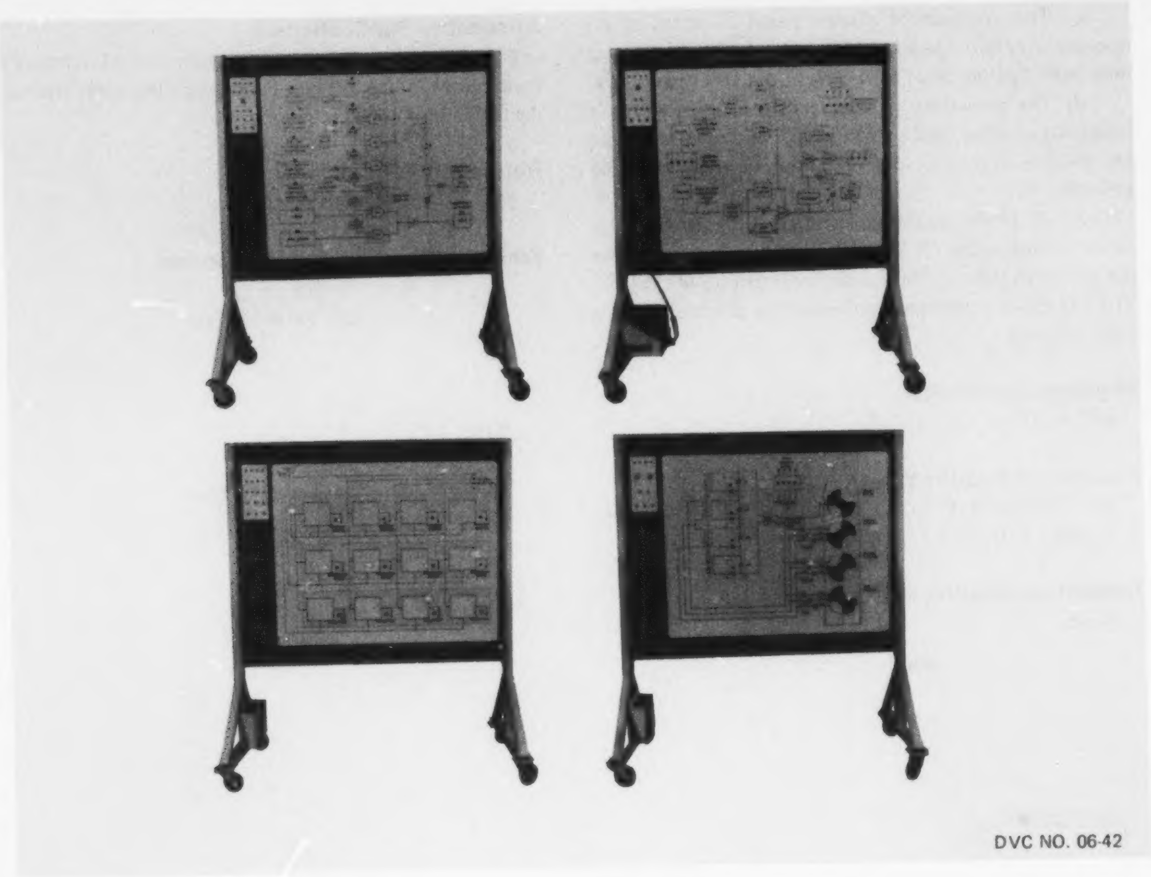
6009 6017

Skill levels 1 and 2

PROGRAMMER-TEST STATION ADAPTER FUNCTIONAL OPERATION TRAINER

DVC 06-42
TR-5

NSN 6920-01-067-1670



DVC NO. 06-42

Training Category/Level Utilized:

Field Artillery/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to provide a means for personnel to develop correct procedural habits in the principles of operation, operating instructions, and maintenance of the Programmer-Test Station. The trainer provides the means for demonstrating the physical and functional characteristics of the programmable voltage comparator, adapter, amtrix, frequency constant monitor, and presetting circuits of the Programmer-Test Station (PTS). The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of four panels that are mounted on movable stands, a power supply, and eight cable assemblies. The panels may be operated individually or collectively by use of interconnecting cables. These panels simulate the following actions:

a. The adapter matrix panel consists of an operator's control panel, logic circuits, and indicators that are used to represent the FC monitor, PVC, and presetting modules of the matrix board.

b. The constant monitor panel consists of an operator's panel, logic circuits, and indicators that are used to represent the FC monitor circuits.

c. The comparator circuit panel consists of an operator's control panel, logic and relay circuits, and indicators that are used to represent the PVC circuits.

d. The presetting panel consists of an operator's panel; logic, relay, and servo circuits; and indicators that are used to represent the operation of the presetting systems.

e. The power supply consists of two regulated modular dc power packs. A 28 volt dc power pack provides the power to light the indicators and operate the relays. The 3.6-volt dc power pack provides power to the trainer's logic circuits.

Physical Information:
48" x 60" x 72"; 150 lb

Equipment Required, Not Supplied:
NAVTRADEV P-3422, dated January 1969, table 1-2, pages 1-3 and 1-4

Special Installation Requirements:
None

Power Requirements:
110 vac, single-phase, 60 cycle

Applicable Publications:
NAVTRADEV P-3422, Operation and Maintenance Instructions for the Adapter Functional Operation Trainer, dated January 1969.

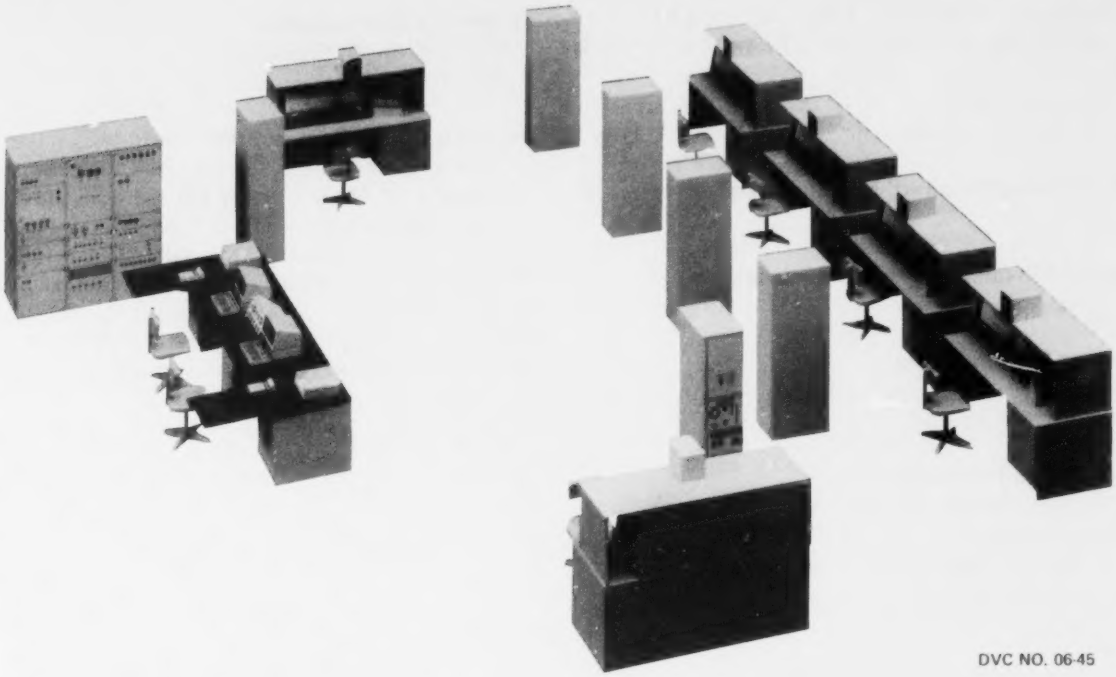
Reference Publications:
TM 9-1425-382 Series

Training Requirements Supported:

	ARTEP 9-59 Task
	28
MOSC 21G	
	SM 016-21G Task
	6017
MOSC 21L	

FIREFINDER RADAR OPERATOR TRAINER

DVC 06-45 **NSN Pending**



DVC NO. 06-45

Training Category/Level Utilized:
Field Artillery/Level 1,2

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
Device 06-45 is a computer driven simulation training device that is used to train the critical operator tasks for the AN/TPQ-36 and AN/TPQ-37 radar sets.

Functional Description:
The device consists of one instructor station, one computer complex, and six operator stations. The operator trainer is designed to simulate accurately all functions of the common shelter from the standpoint of the operator. This trainer will provide the operator with exercises to practice and become proficient in skills required to operate both the Q-36 and Q-37 radars. The instructor station has provisions for two instructors to conduct training sessions. Display information is provided to the instructor and manual input controls allow full command of the training exercise. The instructor is able to monitor and analyze the progress and performance of the student and provide assistance with problems. Instruction programs (scenarios) are stored on the disc and executed under the control of the computer. The operator station simulates the FIREFINDER common shelter Operations Control Group, providing the trainee the controls and instructions necessary to learn to operate the radar set. The operator station is constructed of actual FIREFINDER components (with some modification), commercial equipment, newly designed equipment, and simulated control panels so as to provide the trainee with the sensation that he is physically in the Q-36/37 shelter.

DVC 06-45

Physical Information:

Digital computer system: 30'' x 63'' x 56'' 1,800 lb
Instructor station: 55'' x 132'' x 45''; 550 lb
Main power distribution unit: 10'' x 40'' x 72''; 275 lb
Operator console: 36'' x 72'' x 71''; 800 lb
Shelter power distribution: 22'' x 10'' x 64''; 35 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110/220 vac, 3-phase, 4 wire, 60 cycle, ''Y'' connected, 7.5 kva/phase

Applicable Publications:

Technical Manual for AN/TPQ-36/37 FIREFINDER Training Devices:
DEP PM TRADE P-4544-24 Series
DEP PM TRADE P-4546
DEP PM TRADE P-4547

Reference Publications:

TM 11-5840-354 Series (Q-36)
TM 11-5840-355 Series (Q-37)

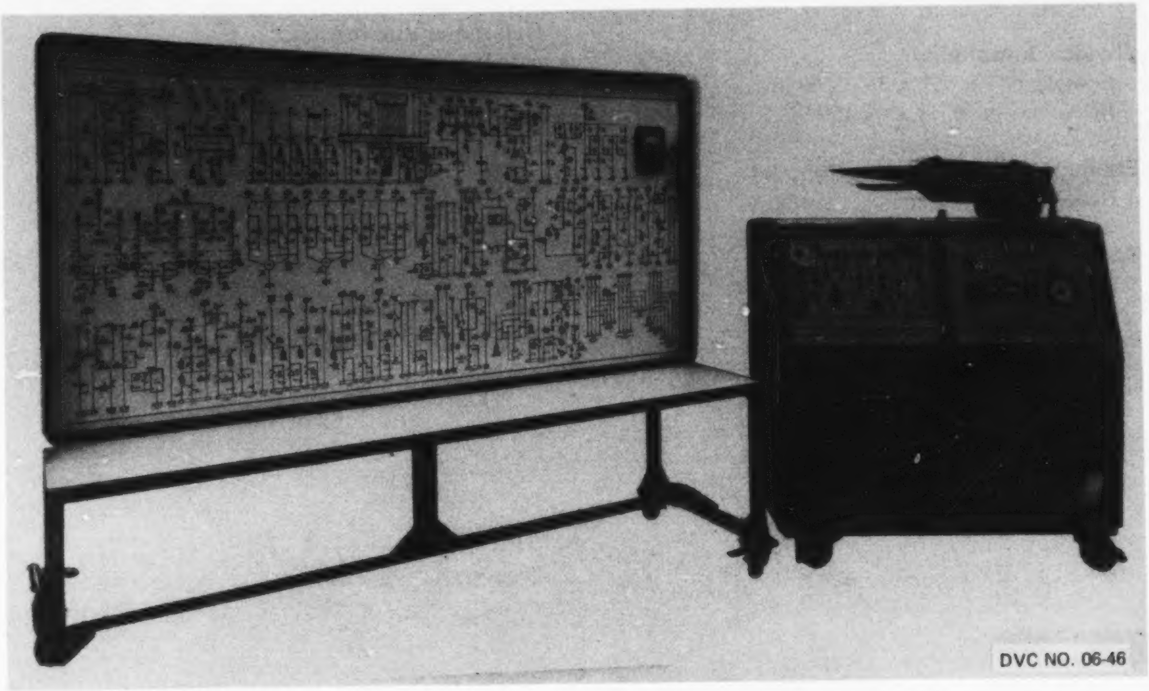
Training Requirements Supported:

New Soldier's Manuals for FIREFINDER Crewmen will consist of FM 6-13R1/2, FM 6-13R3, and FM 6-13R4. Other new individual user publications include FM 6-13RCM (Commander's Manual) and TC 6-13R1/2 (Job Book). Tasks for FIREFINDER organizational and DS/GS maintenance ASI are included in the SM, CM, and TJ for the respective MOS (13R, 26B). Soldier's Manuals for the FIREFINDER system will be available in August 1981.

ERECTOR LAUNCHER SIMULATOR

DVC 06-46
TR3

NSN 6920-01-067-1671



Training Category/Level Utilized:
Field Artillery/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to provide operation and maintenance personnel with a means to develop correct procedural habits, and to develop the student's ability to detect, correctly diagnose, and locate malfunctions occurring in the Erector Launcher Simulator (ELS). The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of two units mounted on movable stands. One unit is a control console consisting of a scale model of the ELS and missile, instructor's control panel, electrical control panel, hydraulic panel, IPTS stimuli panel, and a malfunction fault insertion panel.

The second unit is a schematic display panel. This panel contains test points for monitoring actual circuits to enable analysis of circuit and system operation. Electrical and hydraulic controls and indicators are the same type as used on tactical equipment. Other controls are of a standard type. The IEL model will be operated from the IEL control panel of the console. Stimuli normally provided by the IPTS, and necessary for erecting and recapturing of the missile, will be supplied by the IPTS stimuli unit of the control console. The control console with the IEL model will be operated as an entity for operating procedure training. The two units will be interconnected by two cables to provide power to the schematic display panel.

Physical Information:
Console: 60" x 66" x 36"; 500 lb
Board: 48" x 60" x 36"; 150 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac, 60 cycle

Applicable Publications:
Commercial manual

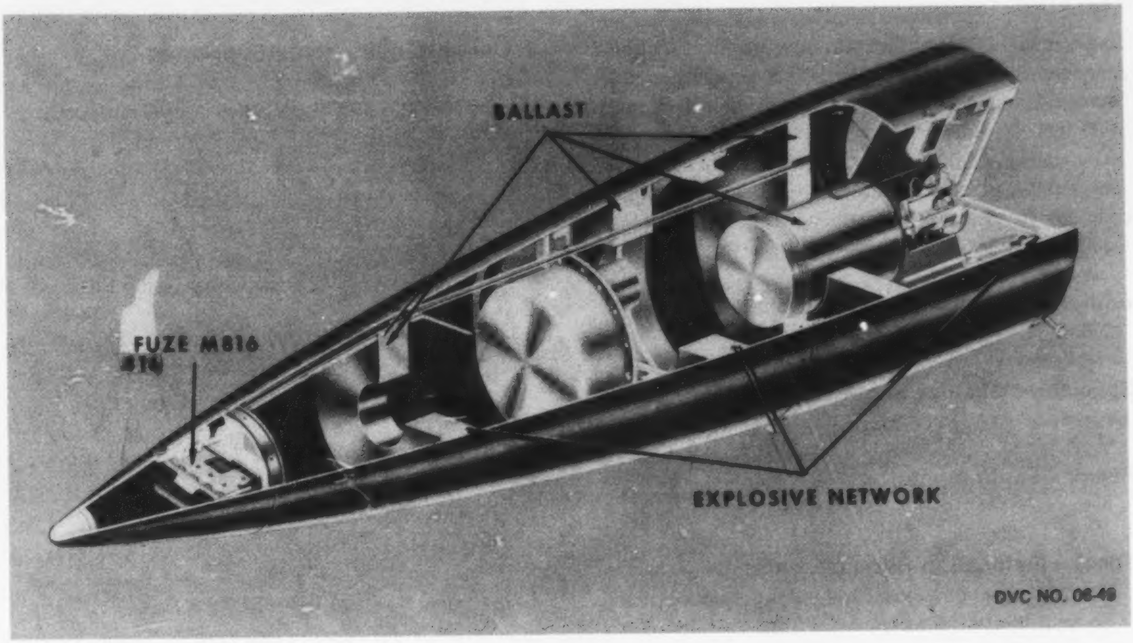
Reference Publications:
TM 9-1425-382 Series

Training Requirements Supported:

	ARTEP 9-59 Task
	40
MOSC 46N	

WARHEAD SECTION GUIDED MISSILE TRAINING: M201

DVC 06-49 NSN 6920-00-933-2532



Training Category/Level Utilized:

Field Artillery/Level 3

Logistic Responsible Command, Service, or Agency:

AMCCOM

Source and Method of Obtaining:

Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:

The training Guided Missile Warhead Section, M201, is a ground handling training warhead section designed to simulate the HE Warhead Section, M251, in external appearance, fuzing, fuzing access, and prefire procedures. It provides the using troops with experience in field handling prefiring procedures of the HE Warhead Section. The device is intended to be used at the US Army Artillery and Guided Missile schools, and in tactical units for advanced individual training in the classroom for fuzing and prefire procedures, and in outside training area for assembly and prefire procedures. The device can accommodate a firing crew during training for assembly and practice procedures. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The warhead section is a completely inert item and consists of the following components:

a. Skin and structure (1/8'' aluminum)

b. Fuze M816

c. Ballast assembly

The warhead section is an exact duplicate of the HE Warhead Section, except that the HE bomb load is replaced by ballast, and the HE operational M811 fuze is replaced by the inert, dummy M816 fuze.

Training Guided Missile Fuze M816:

a. This fuze is an inert dummy fuze designed to simulate the precision, electronic fuse, M811, in appearance and prefire operations. The fuze is bolted to the fuze ring at station 21 in the warhead section and is accessible through a retractable ogive.

b. The settings on the fuze, M816, are identical to those on the tactical M811 fuze.

c. There is a permanent green flap in the SAFE/ARM monitor window on the M816 fuze. Since the fuze is an inert dummy, it cannot be armed.

d. The trainer releases the retractable ogive and pulls it forward, selects the desired fuze setting on the M816 fuze, while being observed by the instructor or crewmember, then pushes the retractable ogive to the rear and locks it in position.

DVC 06-49

Physical Information:

The M201 training warhead section, with fuze, weights 1,000 pounds. Length is 97 inches and has a maximum diameter of 22 inches. The training warhead section is contained in an M544 shipping and storage container, having a length of 116 inches, width of 35 inches, height of 37 inches. Volume is 87 cubic feet. Weight empty is 900 pounds. Weight loaded is 1,900 pounds. The device can be utilized in a classroom by removing shipping container cover, exposing warhead section, for access to fuze and fuze settings.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Special Installation Requirements:

Reinforced or concrete flooring is suggested, if item is to be used in classroom.

Applicable Publications:

TM 9-1336-489 Series

Reference Publications:

TM 9-1336-489 Series

Training Requirements Supported:

ARTEP 6-595 Tasks (Btry Assy/Transport)

6
7
8
9
10
11
12
13
16

ARTEP 6-595 Tasks (Btry Firing Plt)

5
6
16

ARTEP 6-595 Tasks (Bn Ammo Plt)

6
7
8
8
10
13

MOSC 15D

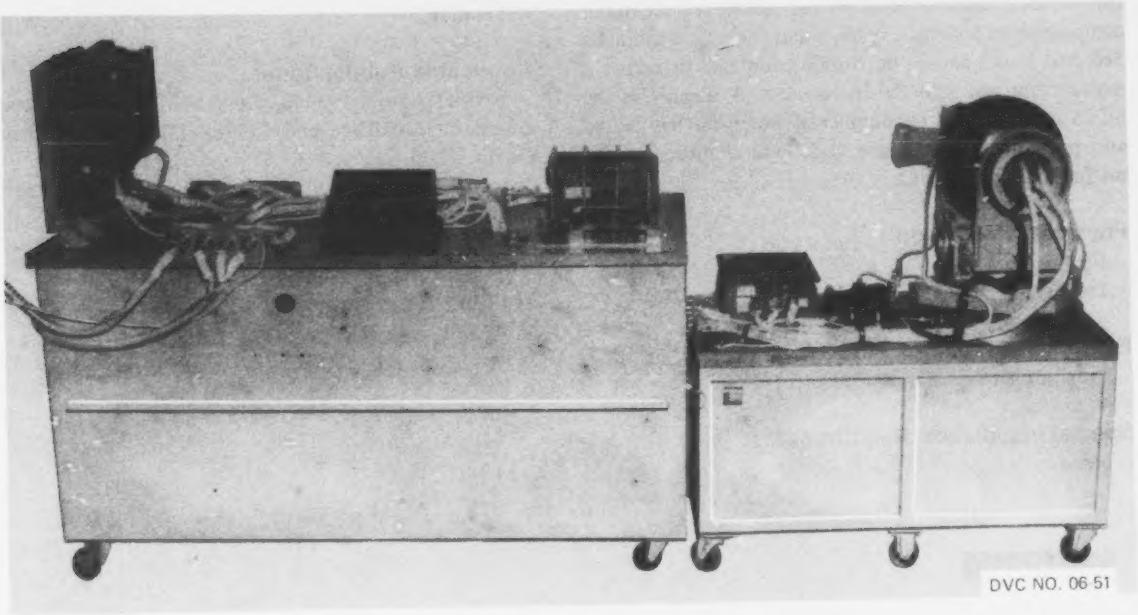
SM 016-285 Tasks

1340
1380
1390
1800
1830
1850
1890
1440
2020

GUIDANCE AND CONTROL DIAGNOSTIC TRAINER (PERSHING)

DVC 06-51
12E5

NSN 6920-01-072-9384


DVC NO. 06 51

Training Category/Level Utilized:

Field Artillery/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to provide a means for teaching PERSHING guidance and control testing procedures. Provides a means for simulating guidance section malfunctions, for teaching procedures for interpreting results of test, and troubleshooting. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a guidance section simulator that allows a trainee to perform a simulated guidance section in-van test using the system Component Test Station (SCTS) and tactical in-van test tapes. Major electrical and pneumatic components are identical to those units used in the PERSHING 1A Missile.

The electrical cabinet consists of the fault inspection panel, missile computer, power inverter, and main and power distribution panels.

The pneumatic cabinet consists of the ST-120 inertial platform and air supply system (check valve, air pressure monitoring switch, air filters, air bottle, pressure regulator, heater assembly, and thermostat).

The fault insertion panel is located on the electrical cabinet. The 50 faults that can be selected by this panel are representative malfunctions that could occur in a guidance section. The panel is connected between the umbilical interface panel on the electrical cabinet and the major components of both the electrical and pneumatic cabinets. Selected faults cause the SCTS computer to detect a malfunction and stop the in-van test. A display in the SCTS indicates the test number at which the test halted and provides a pneumatic code which indicates the malfunction component.

Physical Information:

Electrical cabinet: 72'' x 30'' x 60''
Pneumatic cabinet: 53'' x 24'' x 48''

Equipment Required, Not Supplied:

Programmer test station

Special Installation Requirements:

None

Power Requirements:

110 vac, single-phase, 60 cycle from the programmer test station.

Applicable Publications:

NAVTRADEV P-3940, Operation and Maintenance Guide for Guidance and Control Diagnostic Trainer, Device 12E5

Reference Publications:

TM 9-4935-385-14/3

Training Requirements Supported:

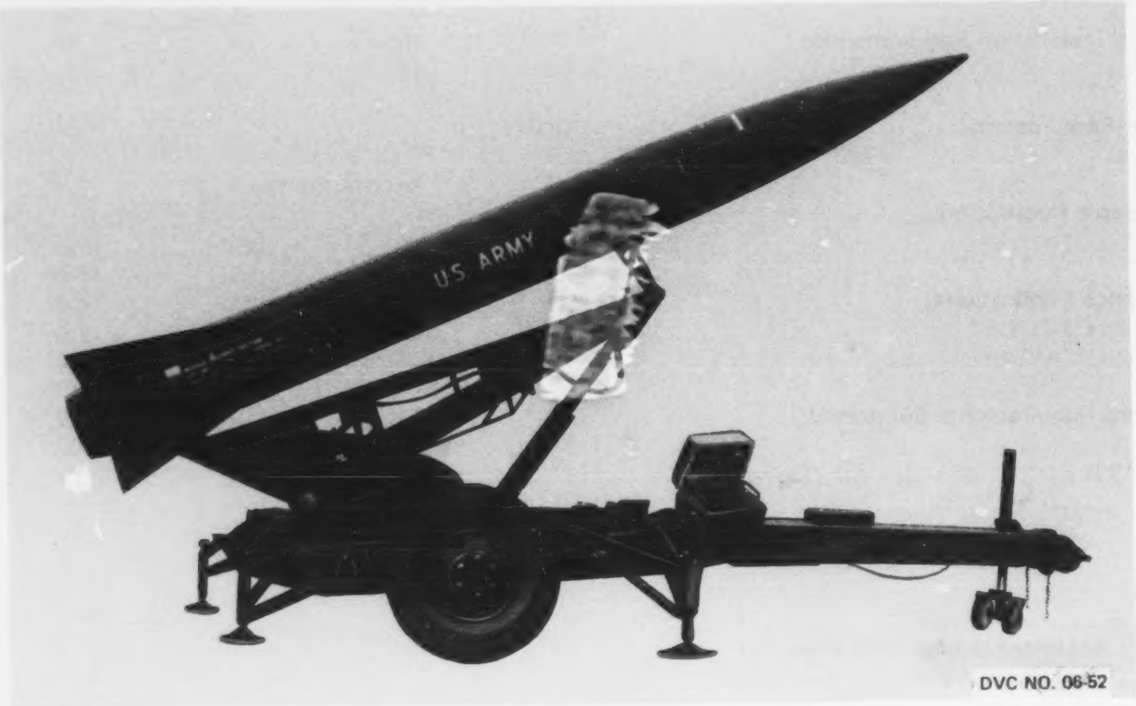
ARTEP 9-59 Tasks	
27	29

MOSC 21L

GUIDED MISSILE, TRAINING (LANCE)

DVC 06-52
M25

NSN 6920-00-937-0856



Training Category/Level Utilized:
Field Artillery/Level 3

Logistic Responsible Command, Service, or Agency:
MICOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
To assist in teaching operation and maintenance of the LANCE Tactical Missile. The M25 Trainer is used by tactical units to maintain missile firing and maintenance crews in a continuous, proficient, combat-ready status. It is also used for service school training of both organizational and support personnel.

Functional Description:
The M25 Training Missile simulates the LANCE Tactical Missile. It consists of a trainer main assemblage made with either a nuclear or nonnuclear trainer warhead section. The trainer main assemblage is an inert, ballasted simulation of the tactical main assemblage.

The training missile provides the same handling, electrical, and mechanical characteristics as the tactical missile. The hyperbolic liquid propellants have been replaced with nontoxic, nonflammable liquids of approximately the same specific gravities.

Physical Information:
Length: 246''
Diameter: 22''
Approximate weight: 2,835 lb, nuclear; 3,350 lb, nonnuclear

DVC 06-52

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
24 vdc

Applicable Publications:
TM 9-1425-485-10-1

Reference Publications:
TM 9-1425-485-10-2
TM 9-1425-485-20

Training Requirements Supported:

ARTEP 6-595 Tasks (Btry Assy/Transport)

6
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ARTEP 6-595 Tasks (Btry Firing Plt)

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18

ARTEP 6-595 Tasks (Bn Ammo Plt)

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15

MOSC 15D

SM 016-285 Tasks

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1080
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1200
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1800
1810
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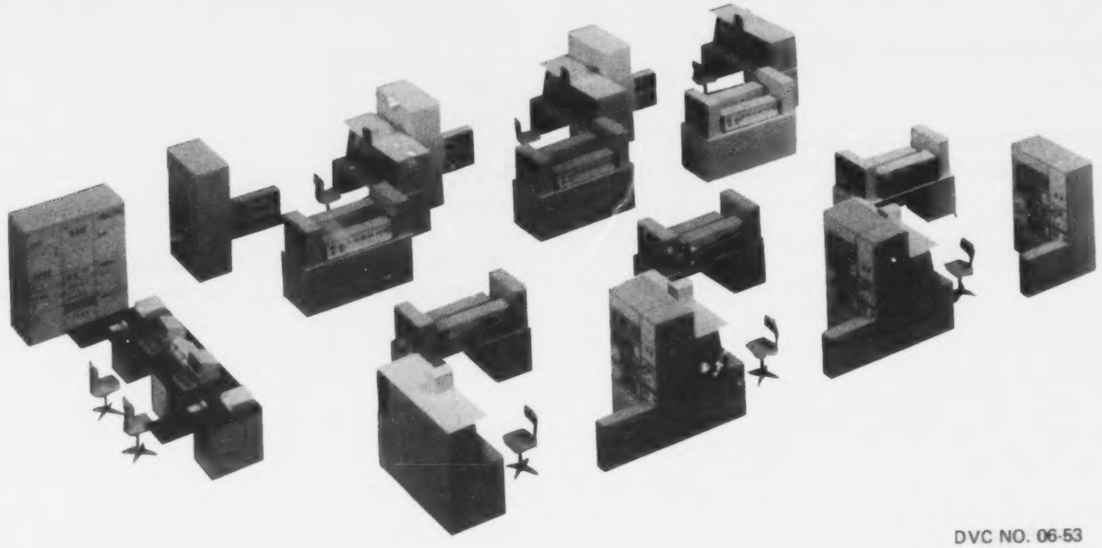
1850
1890
1900
2020

MOSC 27B

MORTAR FIREFINDER RADAR ORGANIZATIONAL MAINTENANCE TRAINER

DVC 06-53 **NSN 5840-01-119-8567**



DVC NO. 06-53

Training Category/Level Utilized:

Field Artillery/Level 1

Logistic Responsible Command, Service, or Agency:

CECOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer will provide a means for personnel who have acquired basic knowledge of the AN/TPQ-36 radar to develop their skills and attain proficiency in the prescribed individual maintenance/repair tasks and task sequences prior to exercising their knowledge and skills on the operational radar. Information concerning training requirements supported is shown following the descriptive data.

Functional Description:

The trainer accurately simulates the organizational maintenance technician's man-machine interfaces of the AN/TPQ-36 radar shelter and trailer equipments. The trainer consists of an instructor station, digital computer system, main power distribution unit, six operator consoles, six shelter power distribution assembly simulators, six trailer maintenance groups, six shelter power supply assembly simulators, six shelter maintenance signal processor assembly simulators, and assorted cables.

Physical Information:

Instructor station: 55'' x 132'' x 45''; 550 lb
Digital computer system: 30'' x 63'' x 56''; 1,800 lb
Main power distribution unit: 10'' x 40'' x 72''; 100 lb
Operator console: 36'' x 72'' x 71''; 800 lb
Shelter power distribution: 22'' x 10'' x 64''; 50 lb
Shelter signal processor: 22'' x 36'' x 66''; 575 lb

Trailer maintenance group: 41" x 52" x 73"; 900 lb
Shelter maintenance power: 10" x 46" x 24"; 50 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
12" raised floor system, 2,025 square feet of floor space

Power Requirements:
110/220 vac, 3-phase, 4 wire, 60 cycle, "Y" connected, 10.9 kva/phase

Applicable Publications:
Technical Manual for AN/TPQ-36/37 Firefinder Training Devices:
DEP PM TRADE P-4544-24 Series
DEP PM TRADE P-4546
DEP PM TRADE P-4547

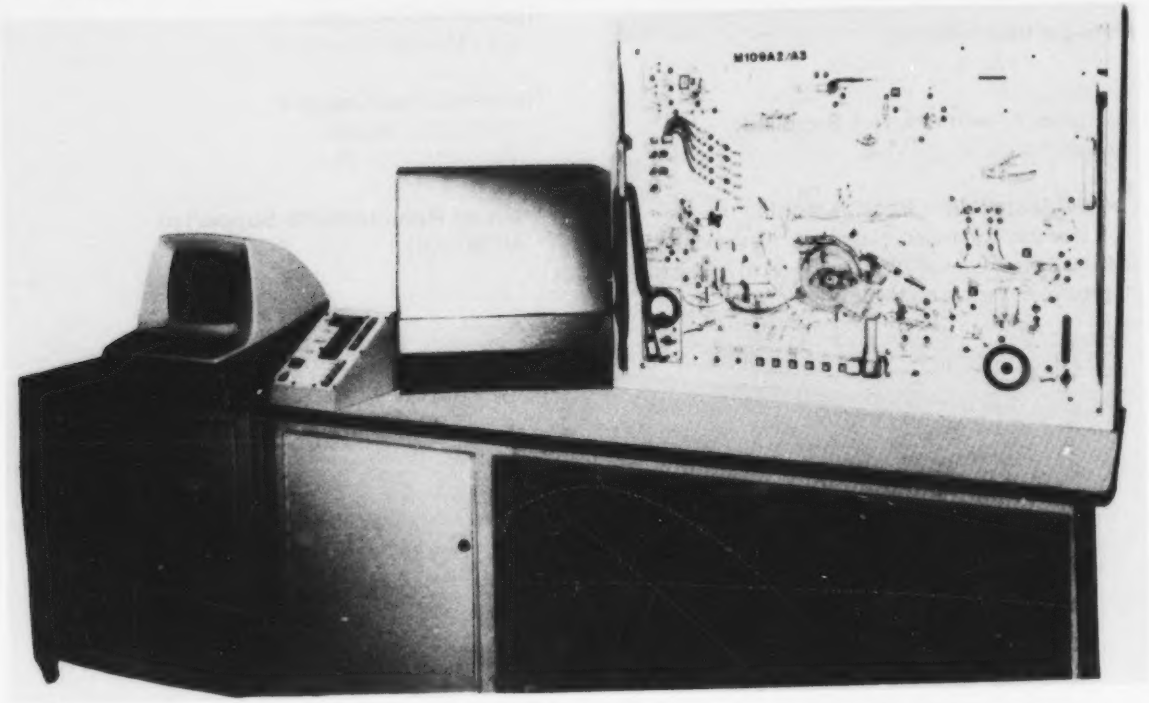
Reference Publications:
None

Training Requirements Supported:
Tasks have been identified but not assigned numbers pending fielding of the system. The trainer will support nearly all ARTEP/SM tasks for MOS 13R.

FIELD ARTILLERY TURRET MAINTENANCE TRAINER FOR M109A1, M109A2/A3, AND M110 SERIES HOWITZER

DVC 6-54
11H82

NSN NONE



Training Category/Level Utilized:
General/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide for the student simulated operations and malfunctions of the M109A1, M109A2/A3, and M110 Series Howitzer Turret hydraulic and electrical systems. The trainer allows the students to practice fault isolation and repair sequences on interchangeable panels that simulate howitzer malfunctions.

Functional Description:
The trainer is equipped with three different panel sets; one each for the M109A1, M109A2/A3, and M110 Series Howitzers. Each set is composed of a front panel, slide set, and floppy disk program. The computer system has several modules which include a Central Processing Unit (CPU), memory, input, and output, with the programs stored on floppy disks. The computer reads inputs from the front panel (which are interchangeable and which display the normal and malfunctioning conditions of the turrets' electrical and hydraulic systems), master console, and CRT terminal and then sends the appropriate outputs to the front panel, master console, CRT terminal, visual and aural systems, and the printer. A panel interface system provides the electronics package which acts as the input buffer gating for the front panel and master console switches as well as output drivers for the front panel and master console lights and displays. The master console is used for the basic control functions of the trainer and is made up of a keyboard, displays, and special action buttons - all used to enter malfunctions, freeze and reset the trainer, enable the printer, and perform a quick self-test of the front panel. A visual system (made up of a rear projection unit, a computer-controlled 35mm random access slide projector, and 80 slide sets) shows actual pictures of parts and are automatically called as the student works through the malfunctions on the front panel. Along with the visual system, the aural system

DVC 06-54

uses a sound synthesizer to give students cues found in the hydraulic or electrical systems, such as solenoid checks and engines and hydraulic pump noises.

Physical Information:
101½'' x 65'' x 29''; 840 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
A climatic controlled classroom that maintains the ambient temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:
110V AC, 60 cycle

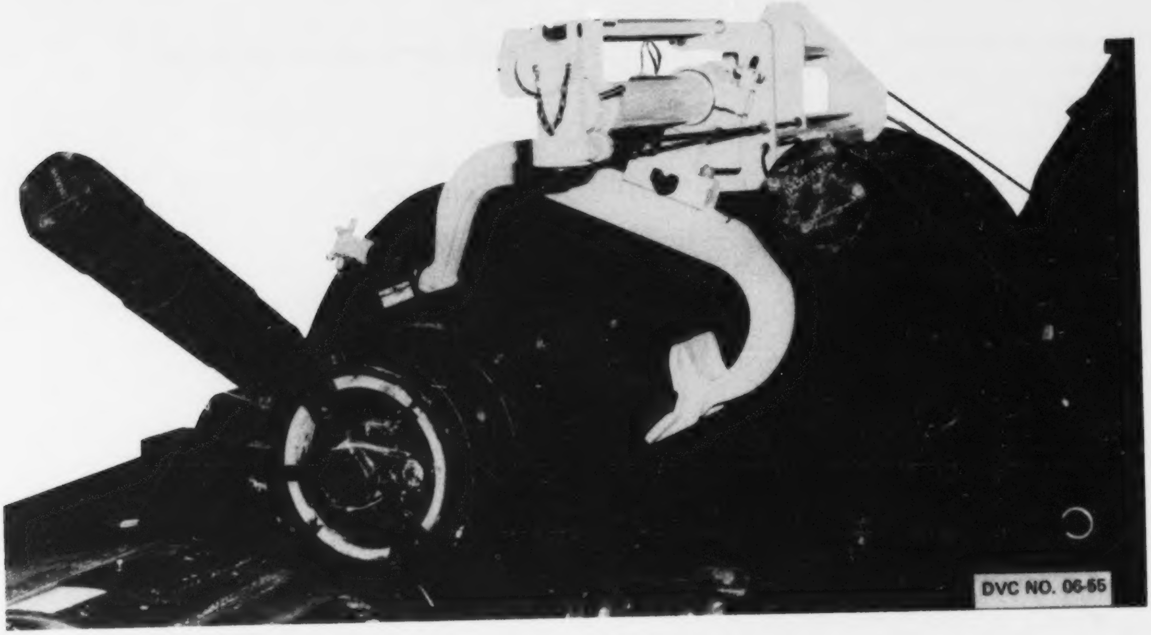
Applicable Publications:
NAVTRADEV P-4763S1

Reference Publications:
TM 9-2350-303-20-2
TM 9-2350-304-20-2

Training Requirements Supported:
MOSC 45D

FIELD ARTILLERY DIRECT FIRE TRAINER—LASER

DVC 06-55
NSN 6920-01-026-0136



Training Category/Level Utilized:
Field Artillery/Level 1,2

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:

This device will develop howitzer crew proficiency in direct fire without expenditure of ammunition. It eliminates the need for impact areas and permits effective training in reduced size, close-in training areas. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The ADFT is a helium gas laser that is attached to the top of 105mm and 155mm howitzer tubes through the use of large C-clamps. In its current design, it is not usable with the 8-inch howitzer. The device has lead and elevation compensating controls and is activated by an electrical lanyard. The device uses 1/10 scale range so actual ranges of 40 to 160 meters represent scale ranges of 400 to 1,600 meters. The guncrew, by using proper direct fire procedure, gets a hit on the retroreflective target. The helium neon gas laser produces a single, bright burst of intense red light each time the device is activated. The optics are fixed focus to obtain a spot of 5/8-inch diameter. Reflection of the laser flashes on the target and can be observed visually by the gunner, assistant gunner, and chief of section. The target is constructed for mounting and towing on a 1/4-ton trailer,

DVC 06-55

and its reflective surface is such that an entire battery can simultaneously engage a target.

Physical Information:

Overall: 26'' long, 5'' high; 17 lb
Barrel length: 16''
Barrel extension length: 9''

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

24 vdc

Applicable Publications:

TM 9-6920-357-10-2
TM 9-6920-357-24 & P

Reference Publications:

None

Training Requirements Supported:

ARTEP Tasks

3-I-4-13 (FM 6-105)
4-I-4-14 (FM 6-165)
3-I-5-13 (FM 6-365)

MOSC 13B

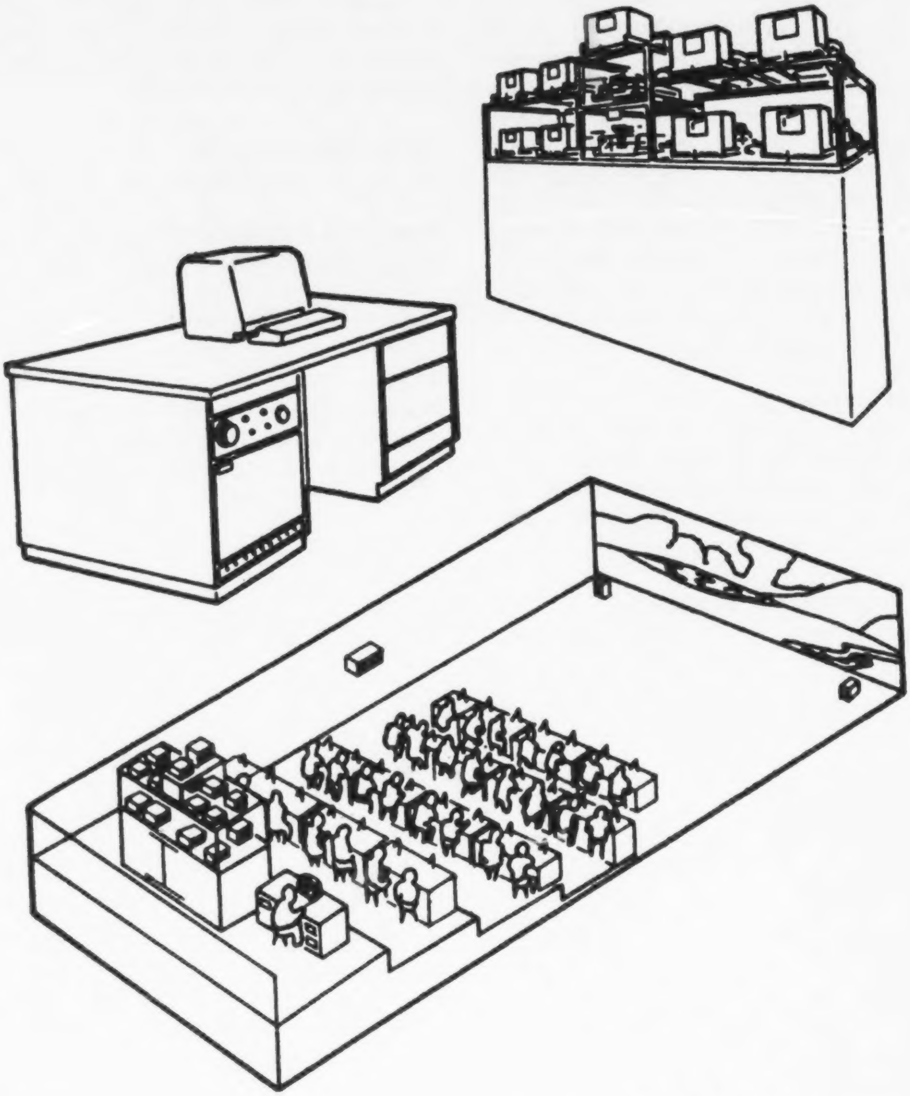
SM 061-266 Task

2230

TRAINING SET, FIRE OBSERVATION (TSFO)

DVC 06-59

NSN 6920-01-102-7853



Training Category/Level Utilized:

Field Artillery/Level 1

Logistic Responsible Command, Service, or Agency:

AMCCOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The TSFO will be used to support indirect fire adjustment training of Active Army, Reserve Components, National Guard, Fire Support Teams (FIST) and other combat arms personnel. Training benefits in map reading, fire planning and other forward observer procedures will also be realized.

DVC 06-59

Functional Description:

The TSFO is an electro-mechanical device employing computer driven optics to simulate the delivery of artillery fire. The device accurately simulates, in a classroom environment, visual and sound conditions similar to those experienced by a forward observers in combat. A high resolution terrain scene is projected onto a classroom screen. A variety of targets may be inserted. The forward observer following standard procedure requests and adjusts artillery or mortar fire onto the target. A computerized system is operated by an instructor who feeds in the problem data and the request for fire. Shell burst and smoke shown on the projection screen allow the forward observer to adjust fire onto the target.

Physical Information:

The TSFO may be housed and operated within any existing improved, dry, and dust free classroom. The minimum room dimensions required to accommodate the computer, projection equipment and 30 students are 45 feet deep, 25 feet wide and 10 feet high.

Equipment Required, Not Supplied:

30 small desks, tables 24'' deep, 30'' wide, 30 chairs, blackboard

Special Installation Requirements:

Classroom must provide ''black-out'' conditions. The trainer's operating environment must be maintained between 60° F to 90° F with a relative humidity of between 20 to 80 percent noncondensing.

Power Requirements:

220 VAC, Single phase, 3 wire, 50-60Hz 30 Amp

Applicable Publications:

Commercial manuals

Reference Publications:

None

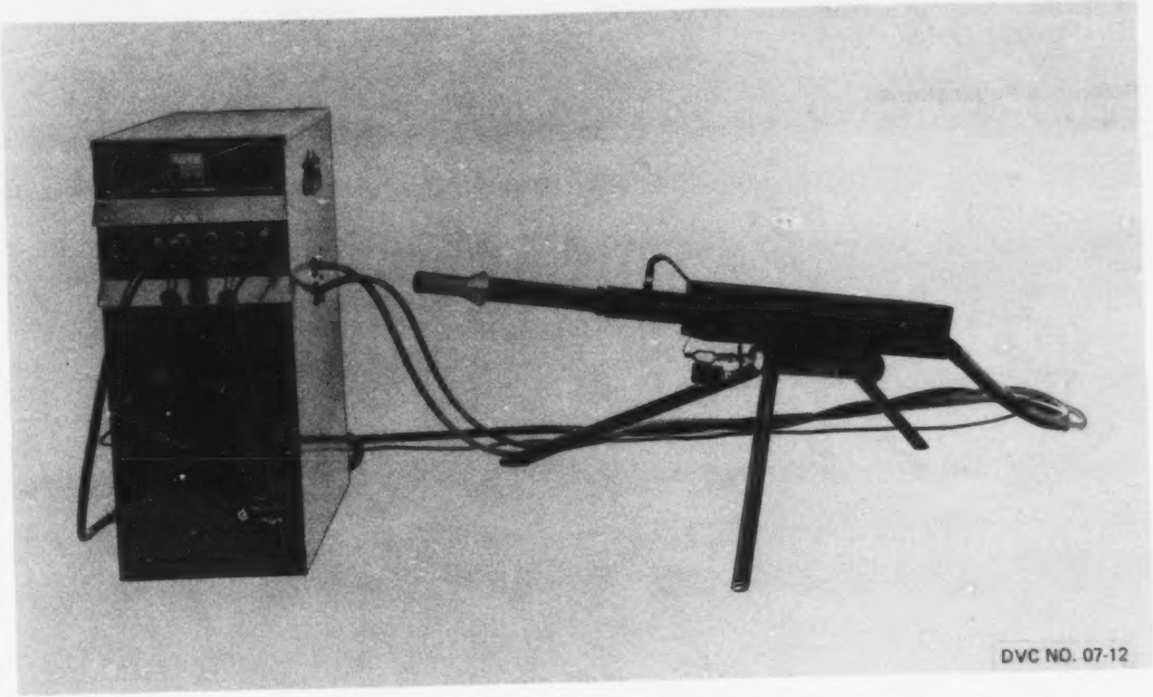
Training Requirements Supported:

MOSC's: 12A, 13A, 13D, 14A, 15A, 21A, 100B
11B, 11C, 11H, 12B, 13F, 16P, 16R, 17C,
19D, 19E, 19G, 19J, 82C.

SMALL ARMS FLASH-NOISE GUNFIRE SIMULATOR

DVC 07-12
3C65C

NSN 6920-01-067-1673



DVC NO. 07-12

Training Category/Level Utilized:
Infantry/Level 3

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:
The trainer provides simulated small arms gunfire, rifle or machinegun noise, and flash for infantry training. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The device consists of a gun simulator, a housing assembly, and a remote control box. Outwardly, the gun simulator resembles a real machinegun. It may be fired from near the "gun" or remotely. It fires single shots or "bursts," using a metered amount of oxygen-acetylene gas which is ignited inside the barrel chamber by a spark plug to produce flash and noise. The housing unit is used to house the oxygen and acetylene cylinders and regulators; and the electrical-timer chassis; and to facilitate handling.

Physical Information:
Gun simulator: 52" x 38" x 21"; 30 lb
Housing: 25" x 15" x 30"; 125 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac, or 12 vdc

DVC 07-12

Applicable Publications:

NAVEXOS P-1997, Operation and Maintenance Guide for Simulator, Small Arms, Flash-Noise, Device 3C65C

NAVEXOS P-1997-S1

Reference Publications:

None

Training Requirements Supported:

ARTEP Task

8-28-F

SM 071-11A Tasks

2004 2005 2304

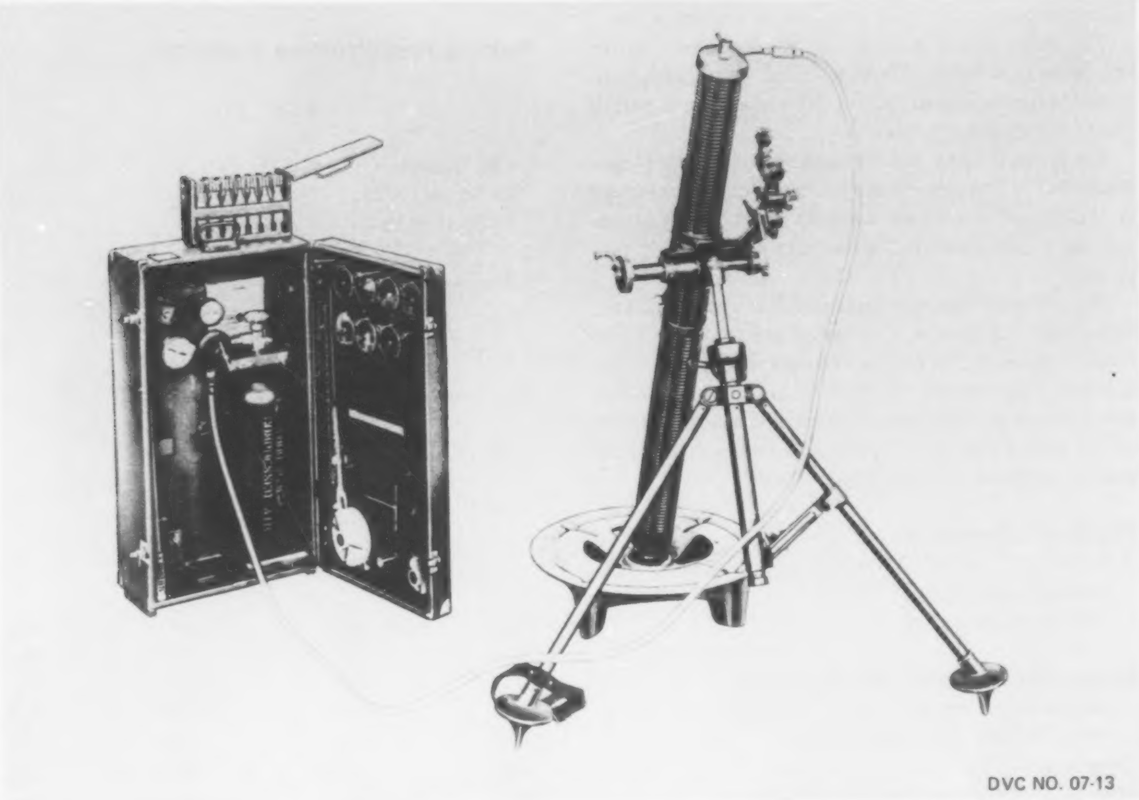
TRAINER, MORTAR, PNEUMATIC

DVC 07-13A
M32

NSN 6920-00-540-6087

DVC 07-13B
M32A1

NSN 6920-00-045-6537



DVC NO. 07-13

Training Category/Level Utilized:

Infantry/Level 3

Logistic Responsible Command, Service, or Agency:

AMCCOM

Source and Method of Obtaining:

Available through local TASCs.

Purpose of Trainer:

For use in the training of 4.2", 60mm, and 81mm mortar crews. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a pneumatically operated unit designed to adapt a 4.2", 60mm, or 81mm mortar to fire the 25mm M379 Training Projectile on a 500-inch, 1,000-inch, or 2,000-inch range. The trainer consists of a barrel and valve assembly; a carrying case; a compressed gas cylinder; a hose assembly; twenty 25mm training projectiles; a projectile rack; and a pressure regulator which incorporates a relief valve, tee, nipple, and other internal parts.

The barrel and valve assembly consists of a non-rifled, seamless, stainless steel barrel; a manual release handle; and a valve assembly. The barrel and valve assembly adapts the operational mortar to receive and fire the 25mm training projectiles.

The trainer carrying case serves as a storage and carrying case for the training unit. Tools and equipment for the trainer are stowed in the case cover.

The compressed gas (air) cylinder consists of a bottle and valve assembly. It is the source of the compressed air supply for operational firing.

The hose assembly consists of 10 feet of 1/4-inch, high-pressure, rubber air hose with a ferrule on one end and a quick disconnect coupling on the other end. The hose assembly serves as a continuous link from the bottle, through the regulator and hose, into the barrel and valve assembly where it is released to propel the projectile.

The M379 Training Projectile has a chamber in the nosepiece in which a .22 caliber blank cartridge is positioned to fire on impact, setting off a report and a puff of smoke for spotting purposes.

The projectile rack has the capacity for storing twenty 25mm M379 Training Projectiles. The rack can be stowed in the top of the trainer carrying case, which comes equipped with a handle for carrying and handling purposes.

The pressure regulator assembly is a self-bleeding, high-pressure regulator with two intake outlets and two output outlets. It mounts a screw-type connection and a high-pressure gage on the intake side, and a blank-face low-pressure gage and female quick disconnect coupling on the output side. The regulator assembly controls the pressure released for each firing charge.

Physical Information:

Trainer M32 or M32A1 complete: 30'' x 17''; 61 lb
Simulator gun assembly: 47 lb
Cabinet group: 183 lb

Equipment Required, Not Supplied:

Ammunition: cartridge, blank, .22 caliber
60mm, 81mm, or 4.2-inch mortar

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-6920-212 Series

Reference Publications:

None

Training Requirements Supported:

ARTEP Tasks

8-42A through X
7-15 Section 7-25
7-15 Section 10-2

MOSC 11C

SM 061-283 Tasks

6002 6004

SM 071-329 Task

1021

SM 071-321 Tasks

1021
1601
1602
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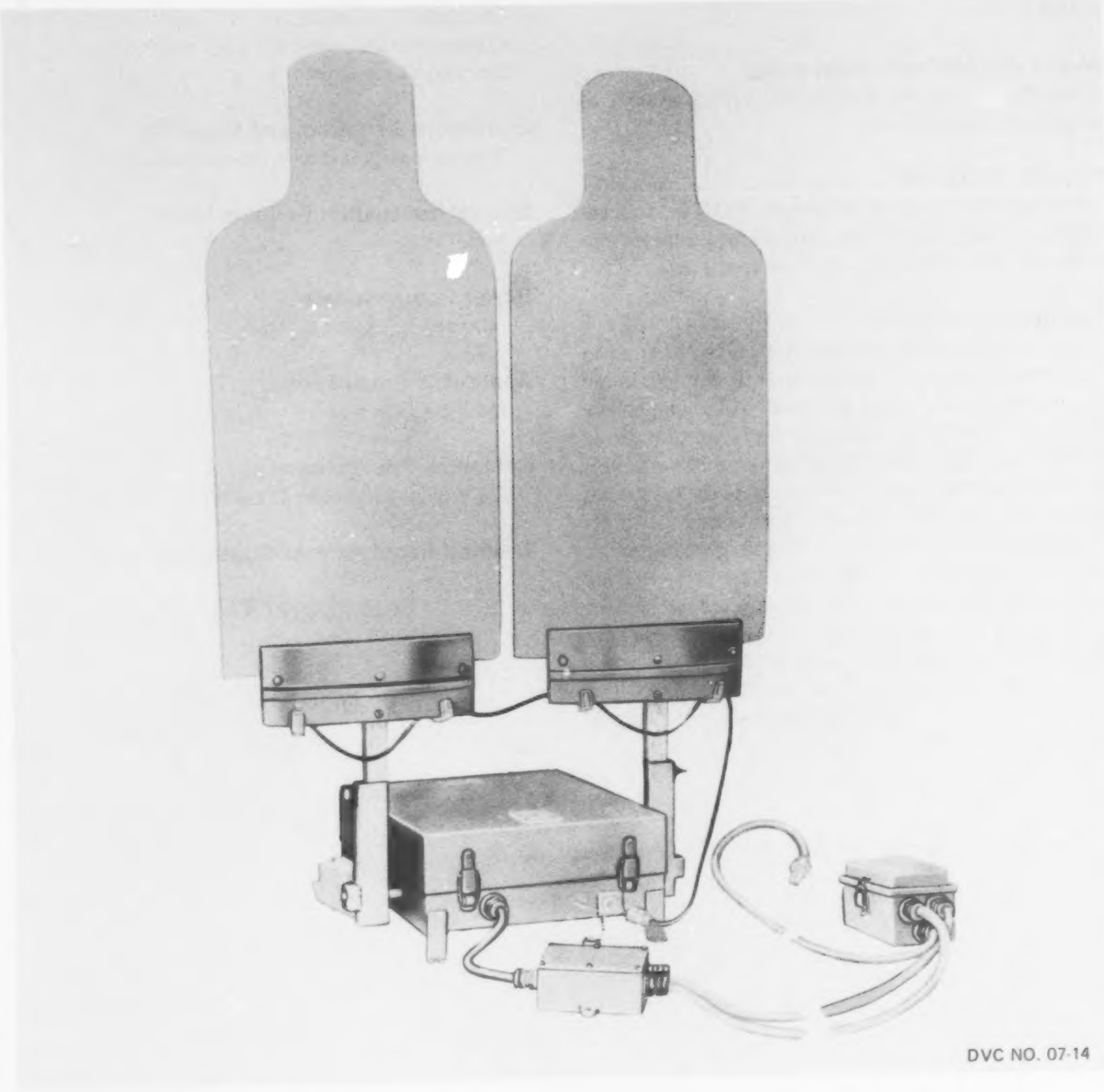
TARGET HOLDING, MECHANISM, TRAINFIRE

DVC 07-14A
M30

NSN 6920-00-678-5279

DVC 07-14B
M30A1

NSN 6920-00-179-7683



DVC NO. 07-14

DVC 07-14A,B

Training Category/Level Utilized:
Infantry/Level 2

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
To support training of infantry in field and combat small arms firing. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The Trainfire Target Holding Mechanism, M30, is an electric motor-driven device designed for use in training for automatic or semiautomatic fire. It will accommodate either the kneeling E-silhouette target or the prone F0-silhouette target. It is designed to hold two targets and is provided with balance weights. It consists of cables, control box assembly, junction box assembly, target holder assembly, switch assembly, and mechanism box assembly. The impact of a hit on the target activates the sensitive switches and relays to the counter the number of hits scored on the target. The Trainfire Target Holding Mechanism, M30A1, is the same as the M30 except it does not have the junction box, cables, or the control box. It does have the internal components of the control box for use in range tower panels.

The M30A1 mechanism is designed for permanent installations; the M30 mechanism is designed for a temporary installation.

Physical Information:
Mechanism box assembly: 20'' x 24'' x 11''; 78 lb
Control box assembly: 9'' x 5'' x 6''; 5 lb
Junction box assembly: 8'' x 7'' x 3''; 3 lb

Equipment Required, Not Supplied:
Silhouette targets (See reference publication.)

Special Installation Requirements:
None

Power Requirements:
110 vac, 3.5 A (max), 60 cycle

Applicable Publications:
TM 9-6920-203-14

Reference Publications:
TM 9-6920-210 Series (Targets)

Training Requirements Supported:

ARTEP Task
8-28-F

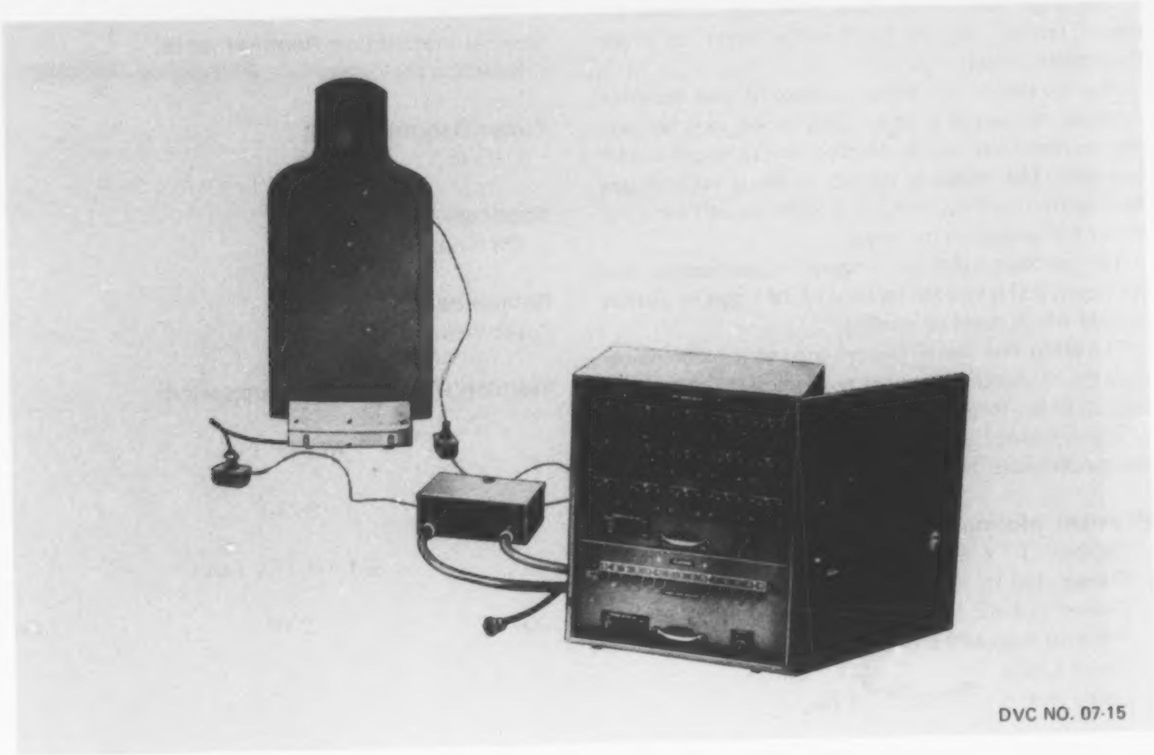
SM 071-11A Tasks

2004 2005 2304

TARGET MECHANISM, NIGHT FIRING, SMALL ARMS

DVC 07-15
M40

NSN 6920-00-678-8478



DVC NO. 07-15

Training Category/Level Utilized:
Infantry/Level 2

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
To support infantry training in field and small combat arms night firing. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is a portable, electromechanical device for use in night firing of small arms. The target mechanism, which can be carried by two men, consists of a cabinet assembly, a counter chassis assembly, a flasher chassis assembly, a terminal box assembly, target holder assemblies, hit-switch assemblies, indicator lights, and utility box assemblies. The target mechanism permits its operator to control up to 15 different target locations.

A sheet metal cabinet serves as a housing for the counter chassis assembly and the flasher chassis assembly, which can be removed as separate units.

The counter chassis assembly is an electromechanical unit containing 15 counters which record the hits made by the trainee upon the target(s) selected by the operator.

The flasher chassis assembly is an electromechanical unit with 15 selector switches for manual operation of the target mechanism for selecting the target(s) to be fired upon. The switches can be operated in any desired sequence for either single or rapid fire.

The terminal box assembly has two color-coded cables which connect to the counter chassis and flasher chassis assemblies. The plug connectors on the cables have quick disconnect coupling nuts so the cabinet counter chassis assembly and flasher chassis assembly can be easily detached from the field (electrical telephone cable) wires.

The target holder assemblies hold and emplace the targets (either kneeling E-silhouette target, or prone F-silhouette target).

The hit-switch assemblies consist of two sensitive switches attached to a cable. Clips on the switches permit the assembly to be attached to the target holder assembly. The impact of the hits on the target activates the sensitive switches, and relays to the counter the number of hits scored on the target.

The indicator lights are mounted on the targets, one per target, and reveal the location of the target by flashes of light which simulate gunfire.

The utility box assemblies are used as junction points from the hit switch assemblies and indicator lights on the targets, to the terminal box assembly.

This mechanism is generally installed as range facility equipment and is not a loan-and-return item.

Physical Information:

Cabinet: 21" x 15" x 24"; 44 lb
Flasher chassis: 19" x 13" x 9"; 18 lb
Counter chassis: 19" x 13" x 14"; 20 lb
Terminal box: 12" x 8" x 4"; 15 lb
Target holder: 14" x 3" x 23"; 2 lb
Utility box: 4" x 2" x 2"; 1 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

TM 9-6920-205 Series

Reference Publications:

TM 9-6920-210 Series

Training Requirements Supported:

ARTEP Task

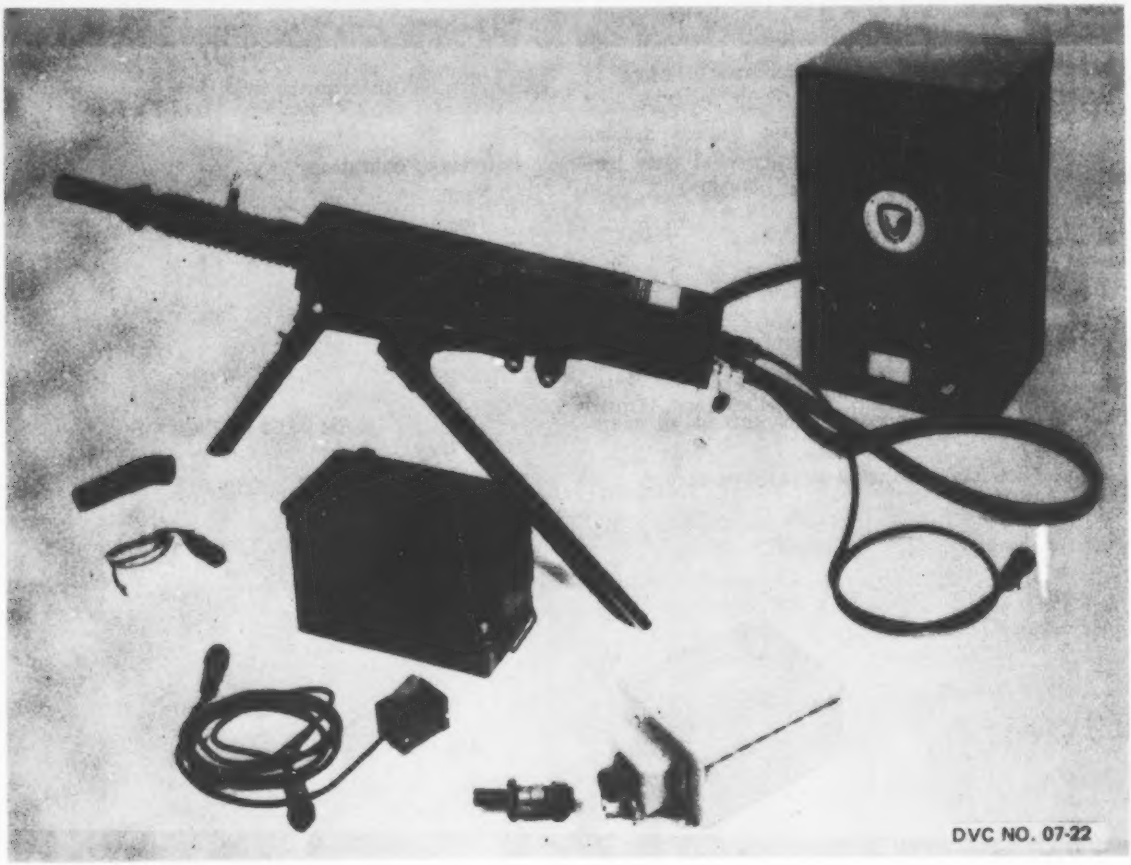
8-28-F

SM 071-11A Tasks

2004 2005 2304

SMALL-ARMS, FLASH-NOISE GUNFIRE SIMULATOR

DVC 07-22	**NSN 6920-01-067-1675**
DVC 07-22C	**NSN 6920-01-099-0169**
DVC 07-22D	**NSN 6920-01-099-0170**


DVC NO. 07-22

Training Category/Level Utilized:
Infantry/Level 3

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:
To provide simulated small-arms gunfire (rifle or machine gun noise and flash) for infantry training. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer consists of a gun simulator, a carrying case, and an ac-to-dc converter. Outwardly, the device resembles a real machinegun. It may be fired from the device or remotely in single shots or bursts, using a metered mixture of oxygen and propane, which is ignited inside the barrel by a spark plug. Oxygen and propane cylinders are enclosed in the carrying case.

An instructor may fire the device remotely while observing results, or a number of these devices may be operated simultaneously by locating remote trigger switches for all related devices at a central location.

Note: Earlier models (DVC 07-22, 07-22A, and 07-22B) used a standard ignition system. Both C and D models use solid state ignition assemblies for greater reliability.

DVC 07-22

Physical Information:

Gun simulator: 51'' x 19'' x 46''; 36 lb
Carrying case: 13'' x 12'' x 23''; 137 lb
Converter; 8'' x 7''; 6 lb

Equipment Required, Not Supplied:

One 24-volt storage battery (for optional dc operation only)
One 3-conductor electrical cable (ac power)

Special Installation Requirements:

None

Power Requirements:

110/220 vac, single-phase, or 24 vdc

Applicable Publications:

For earlier models use: NAVSO P-2964, Maintenance Handbook with Parts List for Simulator, Small Arms, Flash-Noise, Device 3F63

For DVC 07-22C use: NAVTRADEV P-4427, Maintenance Manual with Parts List

For DVC 07-22D use: NAVTRADEV P-4650

Reference Publications:

None

Training Requirements Supported:

ARTEP Task

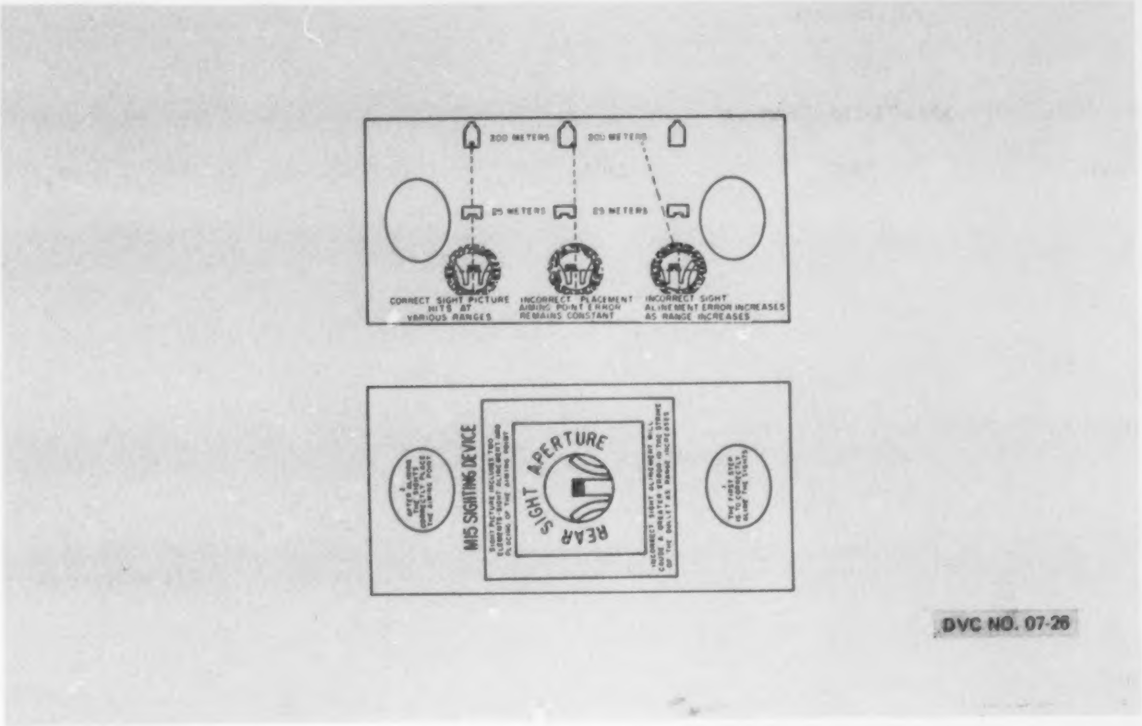
8-28-F

SM 071-11A Tasks

2004 2005 2304

M15 SIGHTING DEVICE

DVC 07-26 **NSN 6910-00-716-0903**


200 METERS
200 METERS
25 METERS
25 METERS
CORRECT SIGHT PICTURE HITS AT VARIOUS RANGES
INCORRECT PLACEMENT AIMING POINT ERROR REMAINS CONSTANT
INCORRECT SIGHT ALINEMENT ERROR INCREASES AS RANGE INCREASES
M15 SIGHTING DEVICE
REAR SIGHT APERTURE
AFTER ALINING THE SIGHTS CORRECTLY PLACE THE AIMING POINT
THE FIRST STEP IS TO CORRECTLY ALINE THE SIGHTS
DVC NO. 07-26

Training Category/Level Utilized:
Infantry/Level 3

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
To support training of riflemen in the firing of the 7.62mm M14 Rifle and the 5.56mm M16A1 Rifle. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The Rifle Sighting Trainer M15 is a cardboard device used to establish correct sight alignment.

Physical Information:
7'' x 4''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
None

Reference Publications:
TM 9-1005-223 Series
TM 9-1005-249 Series
FM 23-9

DVC 07-26

Training Requirements Supported:

ARTEP Task

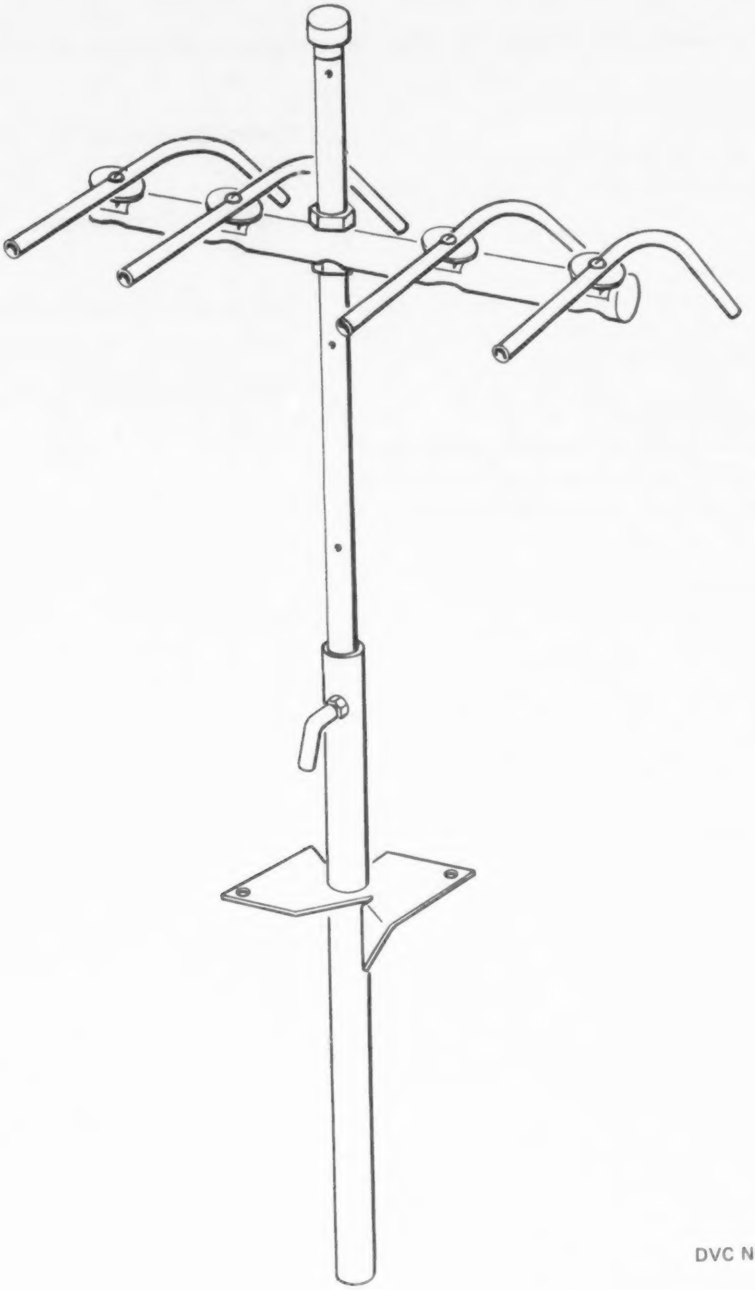
8-28-F

SM 071-11A Tasks

2004	2005	2304

AIMING DEVICE, 4 UNIT, TRAINING AID

DVC 07-27 NSN 6920-00-611-1895



DVC NO. 07-27

DVC 07-27

Training Category/Level Utilized:
Infantry/Level 2

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
To support training of personnel in target detection. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is a Target Detection Aiming Device consisting of four movable pointers on a bar which the student aims at detected targets to enable the instructor to check the student's accuracy.

Physical Information:
64" x 24" x 3"; 15 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
None

Reference Publications:
None

Training Requirements Supported:

ARTEP Task

8-28-F

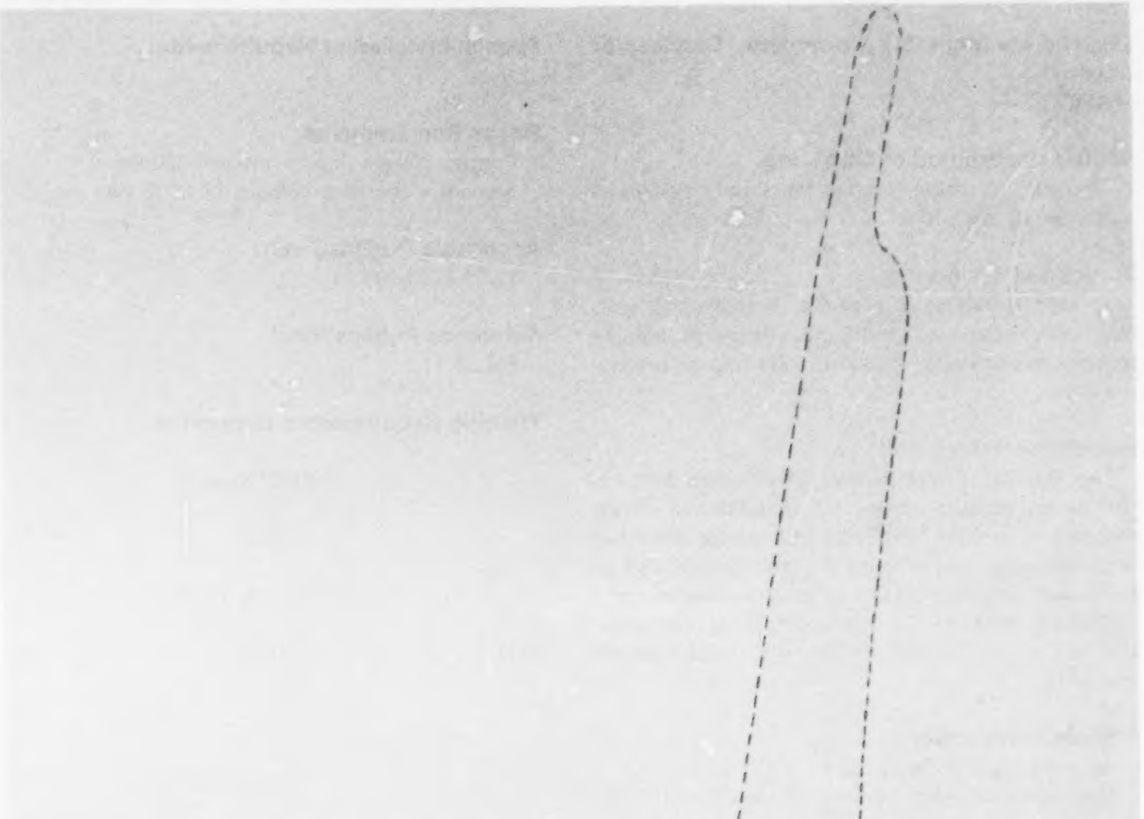
SM 071-11A Tasks

2004 2005 2304

TARGET HOLDING MECHANISM, TRAINFIRE

DVC 07-28B
M31A1

NSN 6920-00-657-7533



DVC 07-28B

Training Category/Level Utilized:

Infantry/Level 2

Logistic Responsible Command, Service, or Agency:

AMCCOM

Source and Method of Obtaining:

Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:

To support training of personnel in individual, unit, field, and combat small arms firing. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The Trainfire Target Holding Mechanism, M31A1, with power pack, is an electric motor-driven device designed for use in rifle training and will accommodate one target, either the kneeling E-silhouette or the prone F-silhouette target. It consists of cable assemblies and a mechanism assembly. The Standard A Trainfire Mechanism, M31A1, replaces the Standard B Trainfire Mechanism, M31.

Physical Information:

Ac power pack M31: 12'' x 8'' x 8''; 24 lb

Mechanism assembly M31A1: 29'' x 17'' x 10''; 72 lb

Equipment Required, Not Supplied:

Silhouette targets (See reference publications.)

Special Installation Requirements:

None

Power Requirements:

Primary voltage (input): 110 and 220 vac

Secondary operating voltage: 12 to 16 vdc

Applicable Publications:

TM 9-6920-203-14

Reference Publications:

FM 23-71

Training Requirements Supported:

ARTEP Task

8-28-F

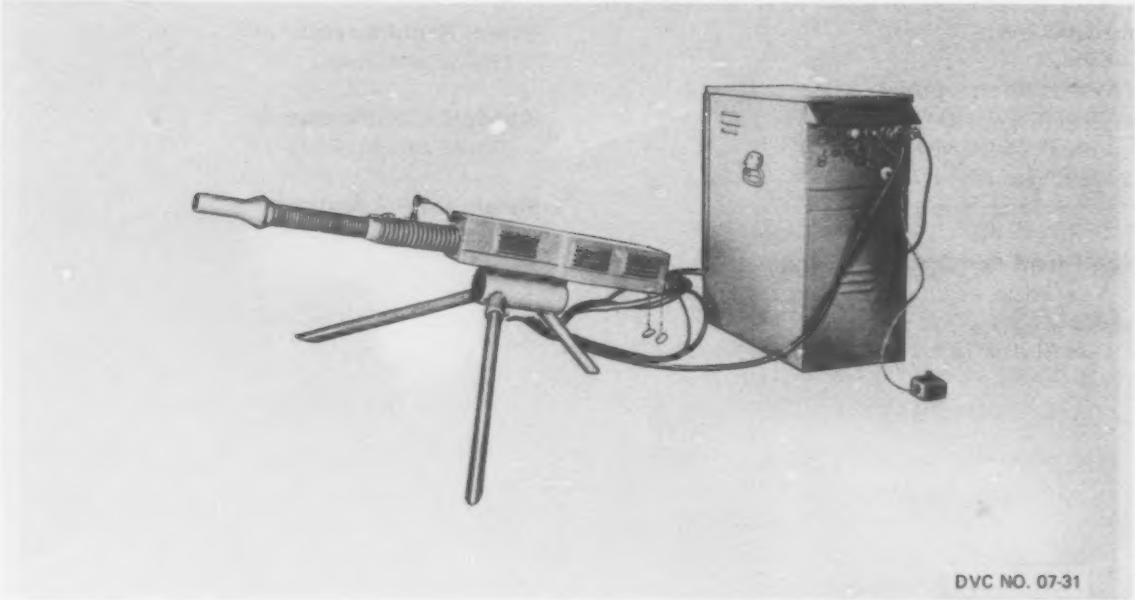
SM 071-11A Tasks

2004 2005 2304

SIMULATOR, SMALL ARMS FIRE

DVC 07-31
M2

NSN 6920-00-649-9282


DVC NO. 07-31

Training Category/Level Utilized:
Infantry/Level 3

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:

The device provides simulated small arms gunfire (rifle or machinegun noise and flash) for infantry training, thus adding realism to day or night training maneuvers and conditioning trainees to the sound and flash of operational small-caliber weapons. The device can be used singly or in multiples to simulate gunfire from defensive positions. Supports field tactical training for all MOSC.

Functional Description:

The M2 Simulator consists of a simulated gun assembly, a cabinet group with timer assembly, and a remote control cable assembly. The operator may control a simulator directly at the timer assembly, or he may control many simulators by means of remote control cables.

The simulated gun assembly consists of the gun group, which mixes and ignites the propane and oxygen gases to produce the flash and noise, and the tripod group, which supports the gun.

The cabinet group is an aluminum cabinet assembly, which houses the timer assembly, oxygen and propane cylinder assemblies, regulator assemblies, cylinder assembly holders, and the battery. It is also capable of storing the cable assemblies.

The remote control cradle assembly is a remote control box with a pushswitch, connector, and cable. The cable is not supplied, as length will vary with the distance between the cabinet and the remote position.

See DVC 07-12 and 07-22 for other versions of gunfire simulators.

Physical Information:

Gun assembly: 45'' x 20''
Cabinet assembly: 16'' x 30''
Timer assembly: 15'' x 10''
Approximate weight: 125 lb

Equipment Required, Not Supplied:

Appropriate length of cable for the remote control assembly

Cable shall be in accordance with TM 9-6920-204-14.

Special Installation Requirements:

None

Power Requirements:

110 vac or 12 vdc

Applicable Publications:

TM 9-6920-204 Series

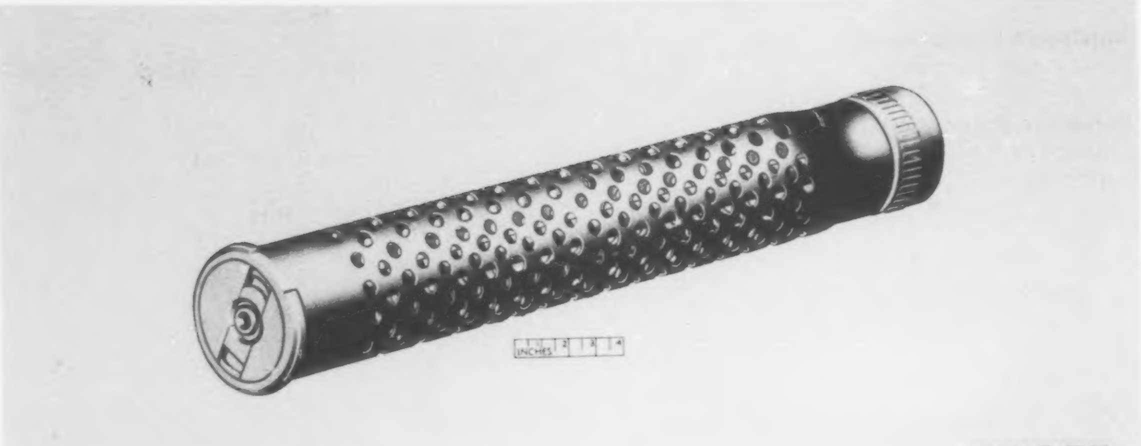
Reference Publications:

None

GUN, SUBCALIBER, CALIBER .30

DVC 07-32
M9

NSN 1005-00-713-2559



DVC NO. 07-32

Training Category/Level Utilized:

Infantry/Level 3

Logistic Responsible Command, Service, or Agency:

AMCCOM

Source and Method of Obtaining:

Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:

The device provides more extensive training in the laying and firing of the M40A1, 106mm Rifle, than would be permissible with larger ammunition. It reduces training costs by adapting the M40A1, 106mm Rifle for the firing of .30 caliber ammunition. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a cartridge case, modified .30 caliber machinegun barrel, cut-off projectile, and a breech assembly.

The primer body has been removed from a 106mm cartridge case, and a hole has been drilled through the base of the cartridge to receive the barrel bushing. A pin in the base of the cartridge case projects into a small slot in the bushing and prevents the bushing from turning when the gun is assembled.

The .30 caliber machinegun barrel has 24 holes drilled into its bore to reduce the muzzle velocity of the subcaliber round. Perforating the barrel also creates a back blast which simulates that of the 106mm Rifle. The .30 caliber barrel is held in place at the muzzle end by a barrel nut which fits inside the cut-off projectile.

The subcaliber round is hand fed into the .30 caliber barrel chamber. The barrel bushing has a trapdoor, or hinge, which contains a floating firing pin. The 106mm Rifle firing pin strikes the trainer gun pin and causes the subcaliber gun firing pin to indent the cartridge. The cartridge case is extracted by hand. (The extractor of the 106mm Rifle is removed when using the M9 Trainer to prevent removal of the trainer gun each time the breechblock is opened.)

Physical Information:

25'' long

Equipment Required, Not Supplied:

Ammunition Cartridge, Ball, Caliber .30, M2

Special Installation Requirements:

None

DVC 07-32

Power Requirements:
None

Applicable Publications:
TM 9-1015-221 Series

Reference Publications:
FM 23-82
TC 7-24

Training Requirements Supported:

ARTEP Tasks

G-30-A G-30-C G-30-D G-30-E
G-30-B

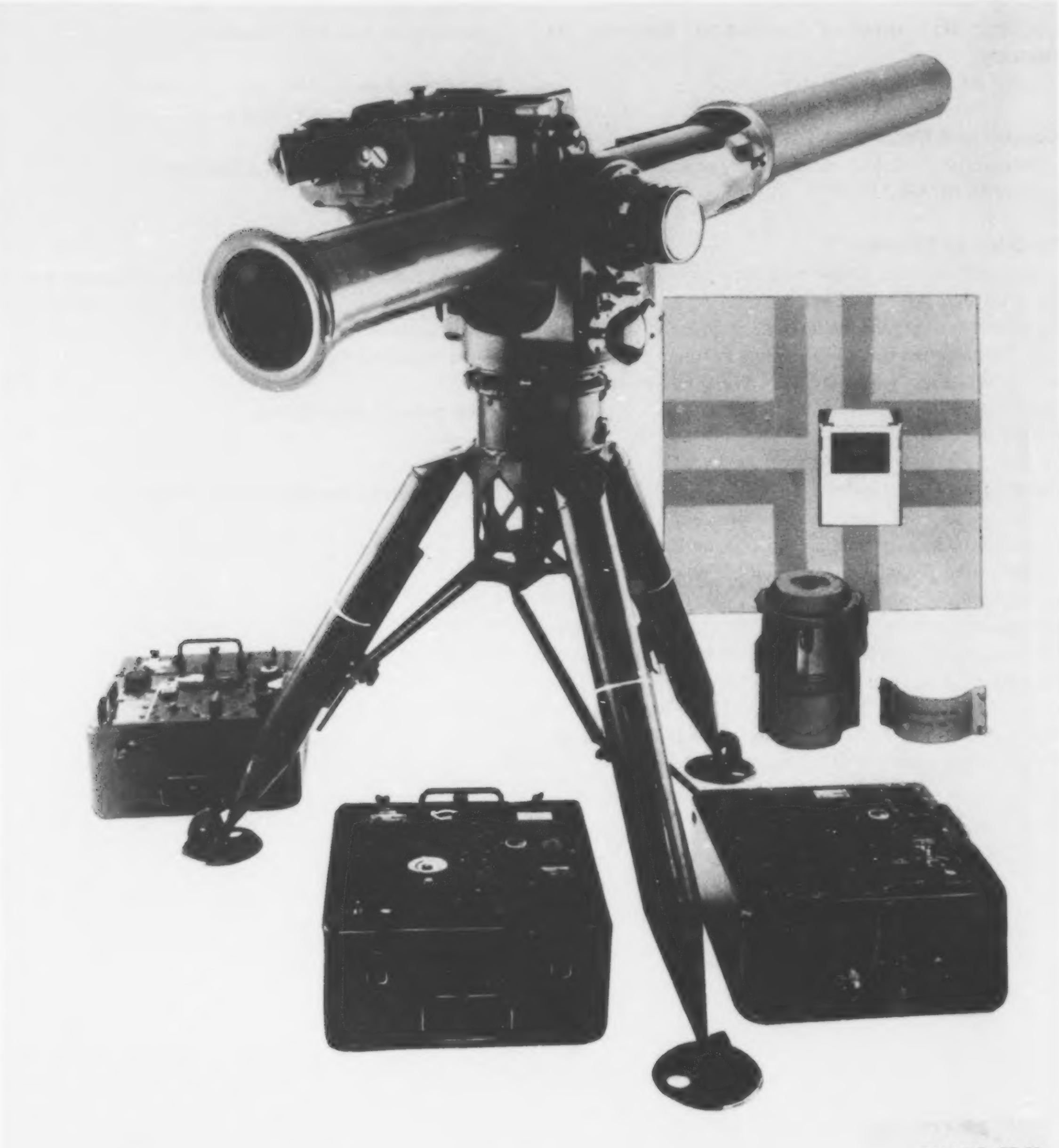
SM 071-31 Task

3611

TRAINING SET, GUIDED MISSILE SYSTEM. (TOW)

DVC 07-41
M70

NSN 6920-00-179-7320



DVC NO. 07-41

DVC 07-41

Training Category/Level Utilized:
Infantry/Level 3

Logistic Responsible Command, Service, or Agency:
MICOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
The training set is a crew-portable trainer designed for use with the TOW Weapon System to provide gunner indoctrination, tracking instruction, practice, and qualification. The target set is used in tracking instruction, practice, and qualification with the TOW Weapon System. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The training set consists of an instructor console, a target set (including vehicle adapters), and a missile simulation round. The instructor's console contains the electronic circuits used to monitor and evaluate the response and tracking performance of the TOW gunner. The target source generates an infrared beam from which target tracking error information is provided, as the target center is tracked by the TOW gunner. The missile simulation round is the same size, shape, and approximate weight as the tactical TOW missile.

Physical Information:
Console: 10" x 16" x 16"; 53 lb
Target: 45" x 45" x 3"; 21 lb
Simulation round: Not available

Equipment Required, Not Supplied:
Launcher, tubular, guided missile: XM151E2

Special Installation Requirements:
None

Power Requirements:
24 vdc vehicle power and internal rechargeable battery

Applicable Publications:
TM 9-6920-470-12

Reference Publications:
None

Training Requirements Supported:

ARTEP Tasks

5-15-D	6-31-C	6-31-E	6-31-G
5-15-E	6-31-D	6-31-F	6-31-H
5-15-F			

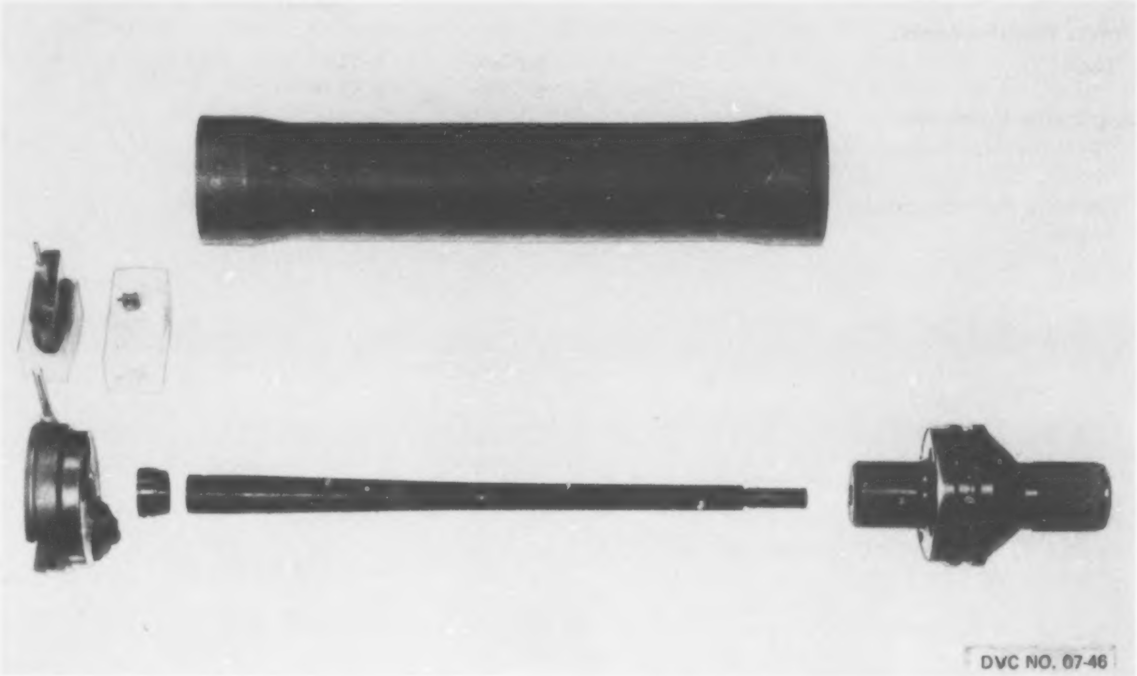
SM 071-316 Tasks

2518 2519

7.62MM SUBCALIBER GUN

DVC 07-46
M149A1

NSN 1005-00-702-8159



DVC NO. 07-46

Training Category/Level Utilized:

Infantry/Level 3

Logistic Responsible Command, Service, or Agency:

AMCCOM

Source and Method of Obtaining:

Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:

The device provides more extensive training in the laying and firing of the M67, 90mm Recoilless Rifle than would be permissible with larger ammunition. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists mainly of a long cylindrical sleeve, barrel, bushing with integral hinge, locknut, housing firing pin, and attaching hardware.

The subcaliber gun is positioned in the barrel of the Recoilless Rifle and is fired with the firing mechanism of the 90mm Recoilless Rifle. The subcaliber gun utilizes a case blow-out principle through six equally spaced holes in the chamber-shoulder section of the barrel. This training device has a comparable trajectory with the major caliber weapon up to 400 meters.

Physical Information:

Overall length of barrel: 16''
Weight of complete gun: 11 lb

Equipment Required, Not Supplied:

Ammunition: 7.62mm M62 Tracer, M80 Ball, or M61 Armor Piercing

DVC 07-46

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
TM 9-1015-223 Series

Reference Publications:
FM 23-11

Training Requirements Supported:

ARTEP Tasks

6-32-A	6-32-C	6-32-E	6-32-F
6-32-B	6-32-D		

MOSC 11H

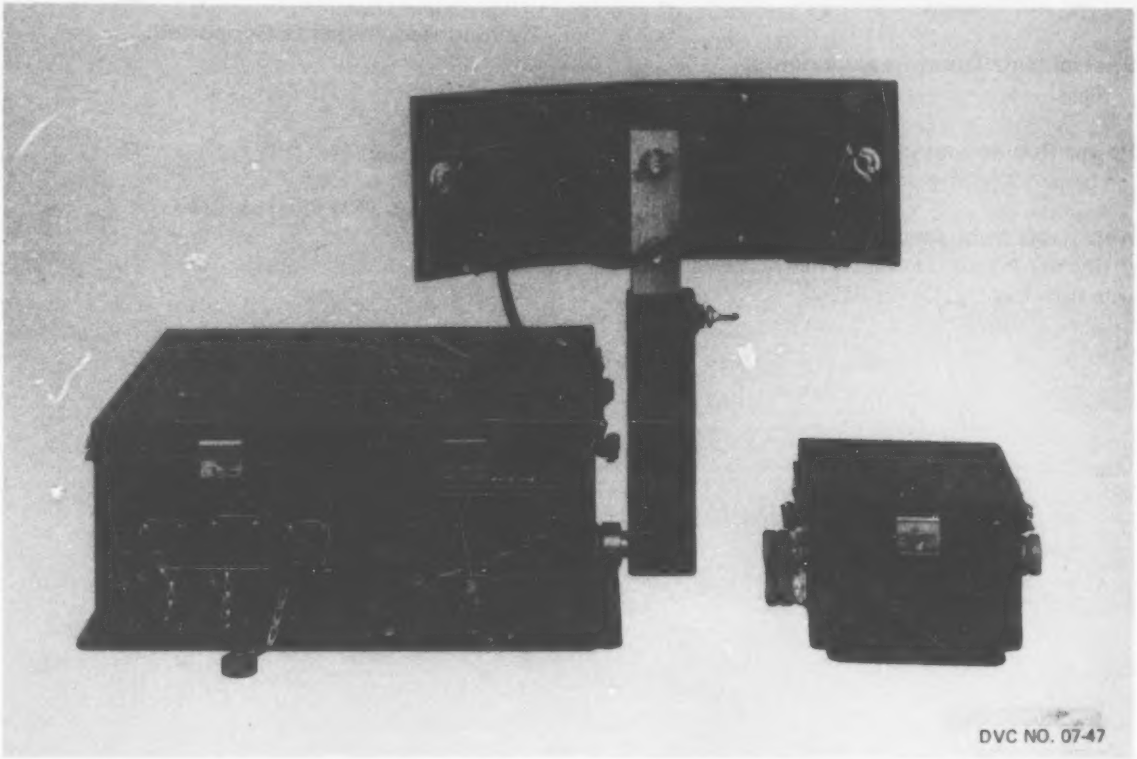
SM 071-319 Tasks

3155

SINGLE POP-UP TARGET SCORING MECHANISM

DVC 07-47
3C52E

NSN 6930-01-063-7532



DVC NO. 07-47

Training Category/Level Utilized:

Infantry/Level 2

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To support training of infantry personnel in the field of small arms firing and marksmanship. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of an electromechanical system for erecting or lowering the targets from a remote location for small arms field firing problems. A counter is provided to indicate the hits scored. The system consists of a control box, mechanism box, hit switch assembly, and a target holder. The target holder is mounted in an arm on the outside of the mechanism box. A target is clamped between the aluminum plates of the target holder. The impact switches which detect hits are clipped to the bottom of one plate.

Physical Information:

14'' x 18'' x 12''; 78 lb

DVC 07-47

Equipment Required, Not Supplied:
Power and control cables
Type E or F targets

Special Installation Requirements:
None

Power Requirements:
110 vac, 2 A, single-phase, 60 cycle

Applicable Publications:
NAVSO P-3108, Operation and Maintenance Guide with Parts Catalog, Device 3C52E

Reference Publications:
TM 9-6920-210 Series

Training Requirements Supported:

ARTEP Task

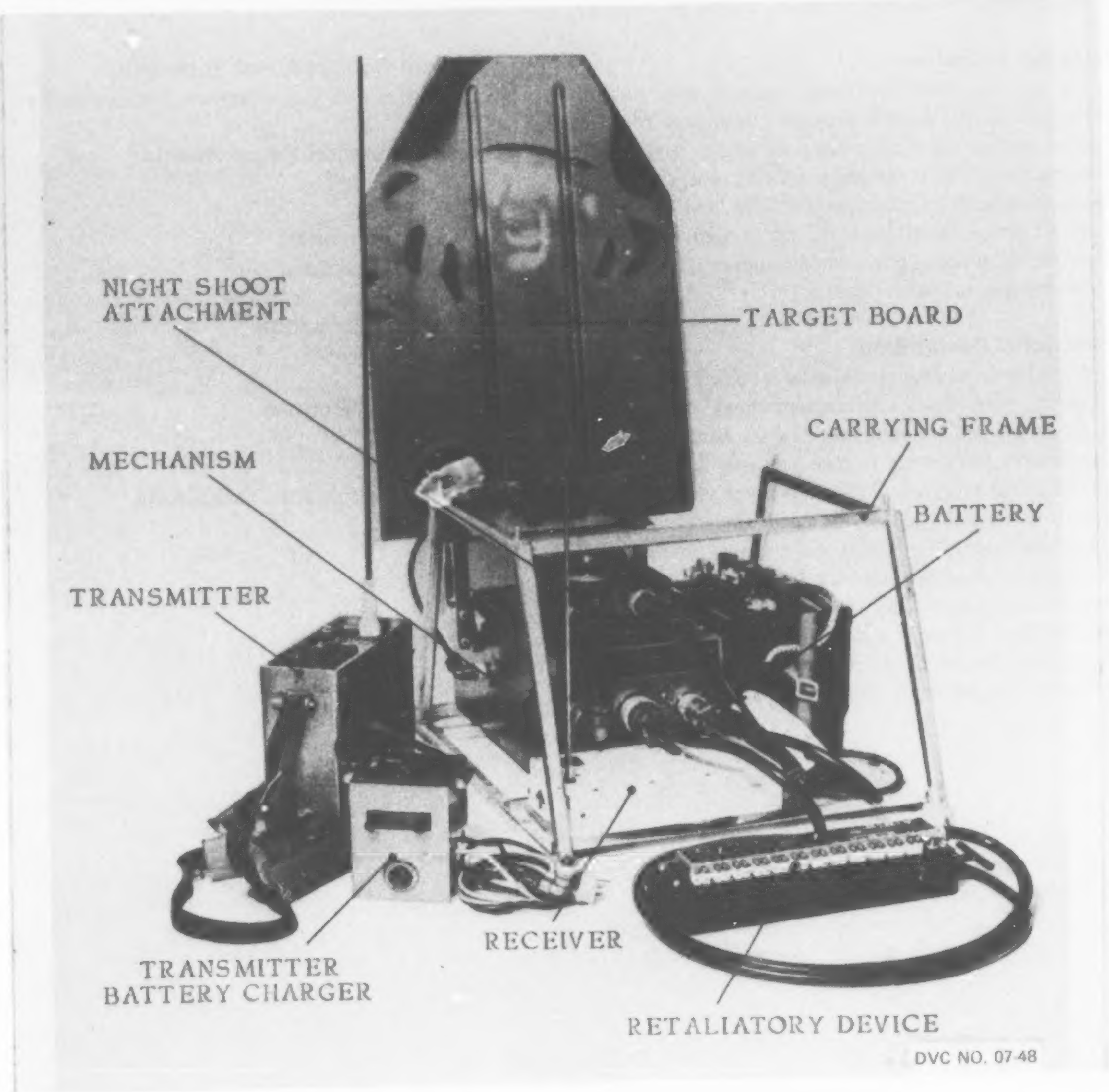
8-28-F

SM 071-11A Tasks

2004	2005	2304

DISAPPEARING AUTOMATIC RETALIATORY TARGET SYSTEM (PORTABLE)

DVC 07-48A	NSN 6920-01-067-1674
DVC 07-48B	NSN 6920-01-067-1676
DVC 07-48C	NSN 6920-01-067-1677
DVC 07-48D	NSN 6920-01-067-1620
DVC 07-48E	NSN 6920-01-067-1678


NIGHT SHOOT ATTACHMENT
TARGET BOARD
CARRYING FRAME
MECHANISM
BATTERY
TRANSMITTER
RECEIVER
TRANSMITTER BATTERY CHARGER
RETALIATORY DEVICE
DVC NO. 07-48

DVC 07-48

Training Category/Level Utilized:
Infantry/Level 2

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For use on an outdoor firing range to train infantry personnel in rifle marksmanship. The trainer provides remote, radio-controlled, small arms targets, and enemy-simulated small arms fire and explosive charges, to meet the requirements of rifle qualifications and battle drill tactical exercises in all-weather, day or night conditions. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The complete system consists of a control transmitter, receiver, night shooter attachment, target mechanism, target board and a control transmitter battery charger. The control transmitter is man portable and transmits signals to the receiver. Connected to the receiver is the target mechanism which, when activated, elevates and lowers the target. The target will drop automatically to the down position when struck by a bullet. The target mechanism is powered by a lead-acid battery. Provisions are included to permit a controlled retaliatory device. The device can be used for night firing which is controlled by a night firing attachment. The target will not respond to near misses, close shot debris, muzzle blast, or wind turbulance.

The device is currently installed in five configurations, each with a different acquisition cost. To identify each configuration, the device is designated 07-48A, 07-48B, 07-48C, 07-48D, and 07-48E.

Physical Information:
Target mechanism: 18'' x 24'' x 24''

Equipment Required, Not Supplied:
Silhouette targets (See reference publications.)

Special Installation Requirements:
None

Power Requirements:
12 vdc vehicle battery

Applicable Publications:
Commercial manual

Reference Publications:
FM 23-9

Training Requirements Supported:

ARTEP Task

8-28-F

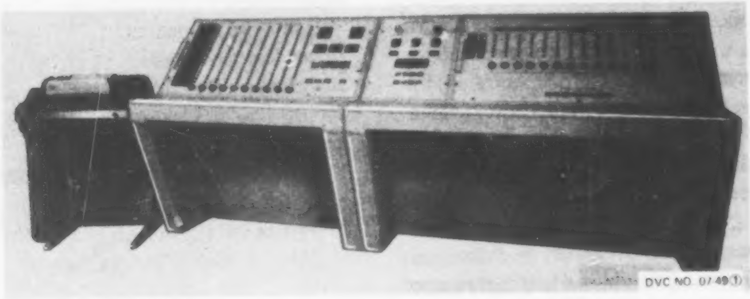
SM 071-11A Tasks

2004	2005	2304

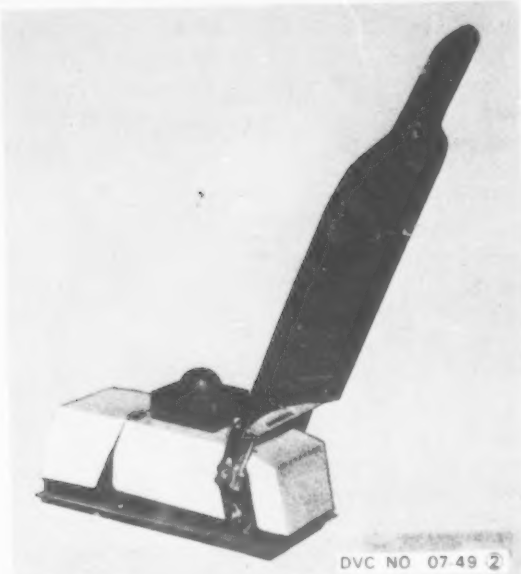
DISAPPEARING AUTOMATIC RETALIATORY TARGET SYSTEM (STATIC-NIGHT FIRING)

DVC 07-49A
3F73A

NSN 6920-01-067-1679



DVC NO 07 49 ①



DVC NO 07 49 ②

Training Category/Level Utilized:

Infantry/Level 2

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To train infantry personnel in rifle marksmanship and qualifications under combat type conditions, on an outdoor firing range. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The version of the Static Disappearing Automatic Retaliatory Target (DART) System is similar to DVC 07-49, but is configured primarily for night firing exercises. The trainer utilizes an outdoor firing range with targets located on 30 lanes with two banks each at 25 and 50 meters. Pseudo, random, low-level, target lighting is provided for night firing. This random pattern varies for each lane in groups of five lanes and is repeated for each succeeding group of five lanes. In addition to the target lowering, an orange light illuminates at each target for 1/2 second to indicate a hit. The console provides system programming, operator control (automatic and manual), range status, and hit recording display. Although the console uses volatile memory for program loading, external battery power can be provided to prevent loss of memory in case of accidental power interruption. A complete firing sequence is usually programmed at one time; however, it can be interrupted and resumed, without loss of sequence, for alibi firing and emergencies.

Physical Information:
Console: 72" x 48" x 54"; 500 lb

Equipment Required, Not Supplied:
Silhouette targets (See reference publication.)

Special Installation Requirements:
Outdoor firing range. MCA funding may be required. Exact cost must be determined on an individual basis according to nature of terrain, magnitude of range, inflation factors, and procurement procedures.

Power Requirements:
110 vac, 60 cycle

Applicable Publications:
Commercial manual

Reference Publications:
TM 6-6920-210 Series (Targets)

Training Requirements Supported:

ARTEP Task
8-28-F

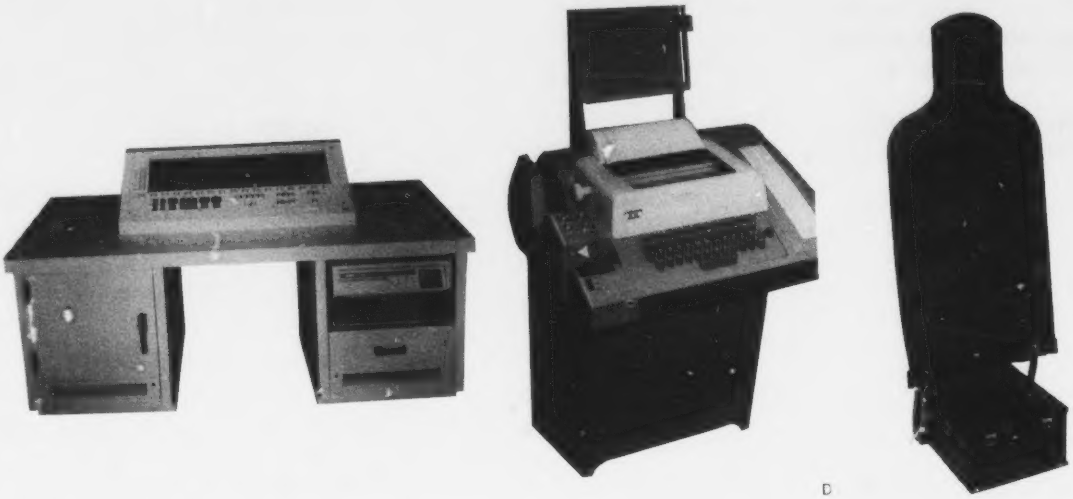
SM 071-11A Tasks

2004 2005 2304

best copy available

DAY RECORD FIRE RANGE TARGET SYSTEM

DVC 07-50 **NSN 6920-01-067-1680**



Training Category/Level Utilized:

Infantry/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To train infantry personnel in rifle marksmanship and qualifications under combat type conditions, on an outdoor firing range utilizing the M16A1 rifle. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The Day Record Fire Range Target System is also known as the FAST system. This is due to the fast hit response and recordings available for information purposes. The system is laid out in a standard range utilizing original contour of land and foliage. There are 16 lanes in increments, 50 meters apart. Buried, hard-wired cabling is used for singal and power control. This system uses a microprocessor, mounted in the CC-10A control console, which provides controlling signals to raise and lower the targets. The raising and lowering sequence and time conform to the latest revisions of Record I and Record II. During firing, hit signals are sent back to the control console and stored in memory. Hits are also displayed on the console while being accumulated in memory. Running totals and scores are provided by a hardcopy score printout from an ASR 33/43 KSP teletype printer. A complete firing sequence is usually programmed for the firer. The program can be interrupted and resumed, without loss of sequence, for alibi firing and emergencies.

Physical Information:

Console: 74'' x 42'' x 32''; 685 lb

Equipment Required, Not Supplied:

Silhouette targets

Special Installation Requirements:

Outdoor firing range. MCA funding may be required. Exact cost must be determined on an individual basis according to nature of terrain, magnitude of range, inflation factors, and procurement procedures.

DVC 07-50

Power Requirements:
110 vac, 60 cycle

Applicable Publications:
Commercial manual

Reference Publications:
TM 9-6920-210 Series (Targets)

Training Requirements Supported:

ARTEP Task

8-28-F

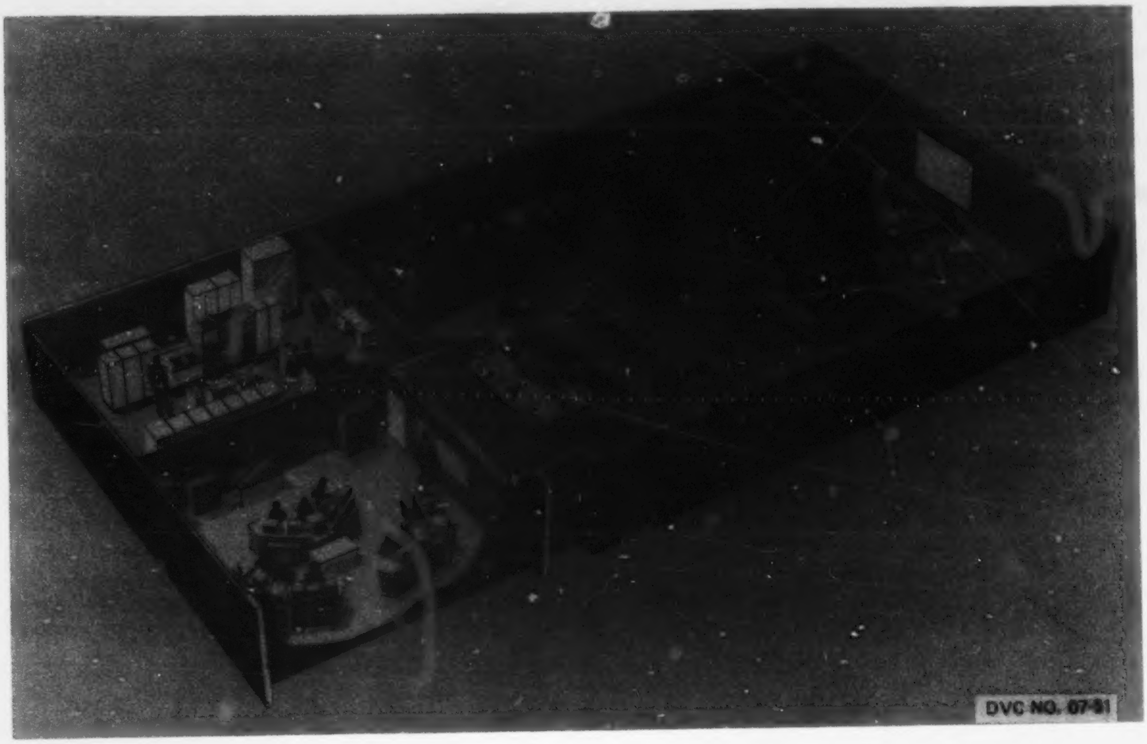
SM 071-11A Tasks

2004 2005 2304

COMBINED ARMS TACTICAL TRAINING SIMULATOR (CATTS)

DVC 07-51
16A3

NSN 6930-01-075-8369



Training Category/Level Utilized:
Infantry/Level 1

Logistic Responsible Command, Service, or Agency:
CECOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide a dynamic real-time simulated combat environment so that battalion commanders and their staffs may train in tactical decision making.

Functional Description:
The Combined Arms Tactical Training Simulator (CATTS) is composed of four basic systems:

a. Tactical Operations Center (TOC). The TOC has mockups of three M557 vehicles and one M113 vehicle. These simulated vehicles represent the operations officer's vehicle (M557), the fire support coordinator's vehicle (M557), the intelligence officer's vehicle (M557), and the commander's vehicle (M113). These mockups can be arranged in various configurations and connected by tentage to form a tactical operations center. Each simulated vehicle contains all the elements of communications which would normally be found in a TOC, i.e., various radio configurations (including radio teletype and telephone system). Utilizing these simulated communications systems, the players (battalion commander and his staff) communicate with the controllers.

b. Controller's Area. Provisions have been made for up to nine controllers who play the part of lower, adjacent, higher units, and enemy forces. The controller's area also has the capability of inputing commands to and receiving information from the computer.

c. Computer. Contains a math model for terrain (elevation relief, soil type, vegetation, and cultural features), weather, direct and indirect fire weapons, ammunition vehicles, fuel, air reconnaissance and ordnance delivery, and friendly and enemy forces. The computer automatically maintains current levels of forces, ammunition, fuel, and expends these as a function of battlefield operations. The model operates in real time with a minute update rate.

DVC 07-51

d. Umpire's Area. Provisions have been made to allow eight people in two four-man groups to monitor the exercise. The umpires can monitor all communications between controllers and players as well as observe the interactive graphics used by the controllers. The umpires can communicate among themselves but not with the controllers or players.

The CATTS has provisions for replaying a 4-hour exercise, complete with graphics and communications. Additionally, a hard copy postgame summary provides detailed information on the conduct of the exercise.

Physical Information:

The system requires approximately 5,000 square feet of classroom space with elevated flooring in the computer and controller areas.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Climatic controlled building that maintains an ambient air temperature of 70°F at a relative humidity of 60 percent or less is desirable.

Power Requirements:

220 vac, 125 A, 60 cycle

Applicable Publications:

Commercial manuals.

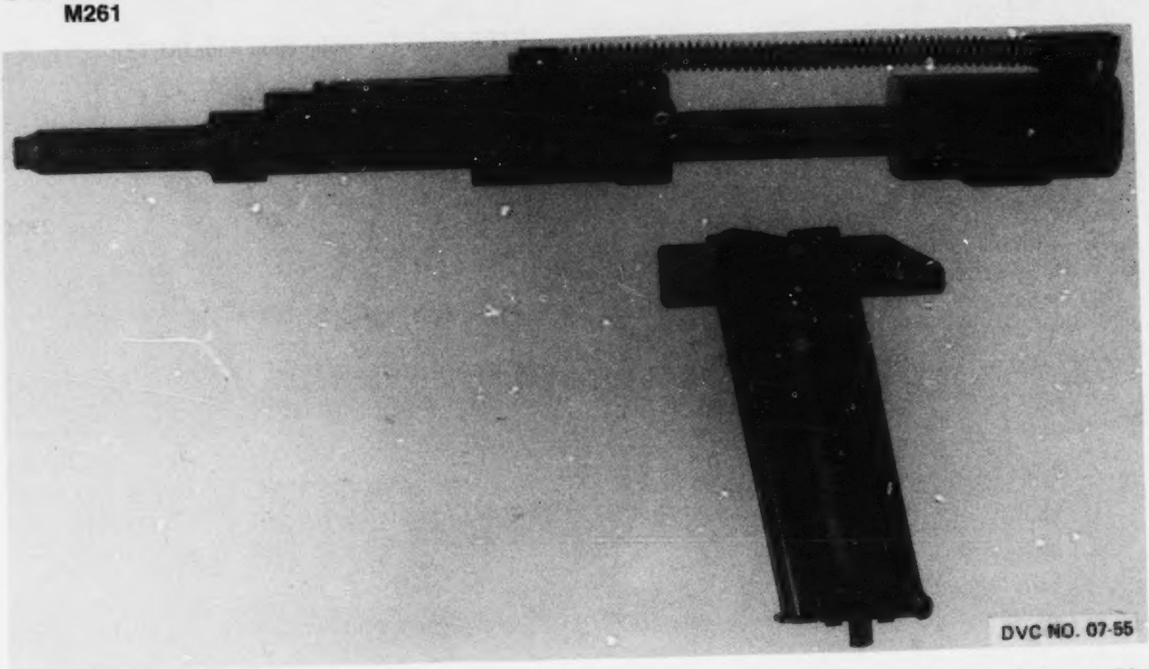
Reference Publications:

None

CONVERSION KIT, 5.56MM (RIMFIRE)

DVC 07-55
M261

NSN 1005-01-010-1561



Training Category/Level Utilized:
Infantry/Level 3

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:
The Conversion Kit (CK) provides a method to use .22 caliber, LR, rimfire ammunition in the M16 or M16A1 Rifle for individual training purposes. The use of .22 caliber ammunition in place of the standard military 5.56mm ammunition will result in reduced training costs and allow the use of firing ranges that cannot accommodate the higher velocity and longer range cartridges. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The device consists of two major components: a magazine insert (or adapter), for .22 caliber, LR, ammunition, and a bolt assembly. The magazine component is a 10-round magazine which fits into a standard 5.56mm 20- or 30-round magazine. The .22 caliber bolt assembly consists of a smoothbore barrel configured externally to the 5.56mm chamber, and internally to accept the .22 caliber, LR, cartridge and a bolt with a rimfire firing pin. The device is installed in the M16 or M16A1 Rifle in place of the regular bolt carrier group, is blow back operated, is capable of firing in the semiautomatic mode only, and is limited in accuracy to 50 meters.

Physical Information:
Bolt adapter assembly: 8.75''; 1 lb
Magazine insert: 3''; 4 oz

Equipment Required, Not Supplied:
.22 caliber rimfire ammunition

Special Installation Requirements:
None

Power Requirements:
None

Special Requirements:
Familiarization with range procedures, weapon operation and maintenance, and safety practices.

DVC 07-55

Applicable Publications:
TM 9-6920-363-12&P

Reference Publications:
FM 23-9
FM 38-750
TM 9-1005-249 Series

Training Requirements Supported:

ARTEP Tasks (in conjunction with IRETS):

8-28-F

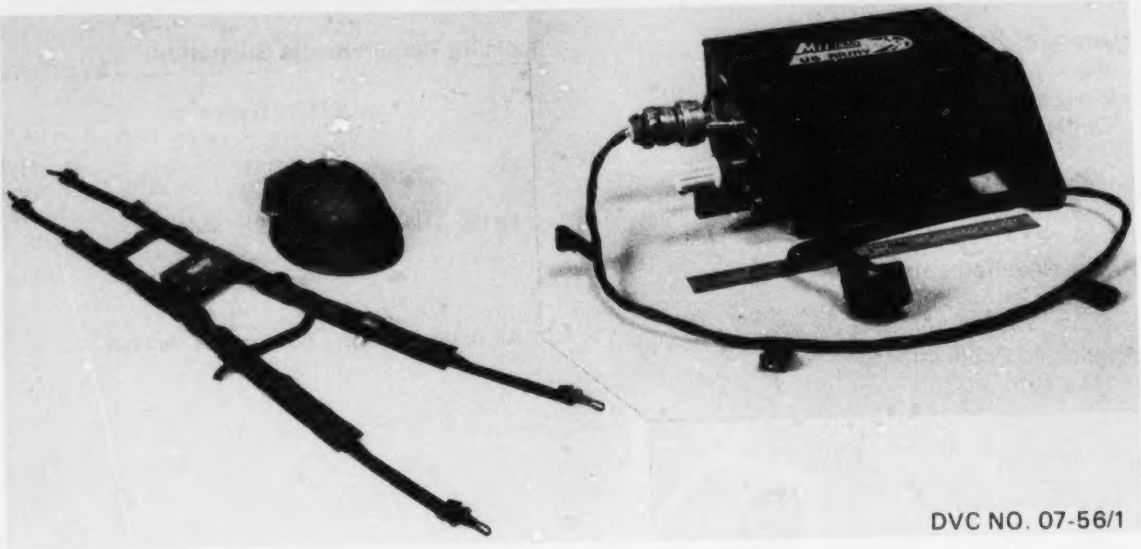
SM 071-11A Tasks

2004 2005 2304

SIMULATOR SYSTEM, FIRING, LASER: M16A1 RIFLE

DVC 07-56/1
M60

NSN 1265-01-085-1583



DVC NO. 07-56/1

Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASCs

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machineguns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The MILES family, consisting of nine different weapon fire simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machineguns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Simulator System, Firing, Laser, M60 for M16A1 Rifle consists of a laser transmitter mounted on the barrel of the M16A1, a man-worn detector assembly installed on a load-carrying harness, and a strap which fits over a standard issue steel helmet. When a laser beam from a transmitter strikes a detector, an alarm located near the soldier's left ear informs him when he has suffered a "near miss" or that he has been "killed". If the soldier is killed the alarm will be continuous. To shut off the alarm, the soldier must remove a key from his transmitter and put it into a receptacle on his load carrying harness. With the key removed from the transmitter, the laser transmitter will not operate. Removing the weapon capability to fire, simulates a combat casualty.

DVC 07-56/1

Physical Information:
Transit case: 29" x 22" x 28"

Equipment Required, Not Supplied:
Battery, BA 3090 (9V, transister)
Firing attachment, blank ammunition, M15A2
Cartridge, 5.56mm blank, M200

Special Installation Requirements:
None

Power Requirements:
9 vdc

Applicable Publications:
TM 9-6920-370-10-1

Reference Publications:
Associated Weapon System Manual

Training Requirements Supported:

ARTEPs Supported

7-15 17-55 71-2

MOSC 11B, 11Z, 19D, 19E, and 19Z

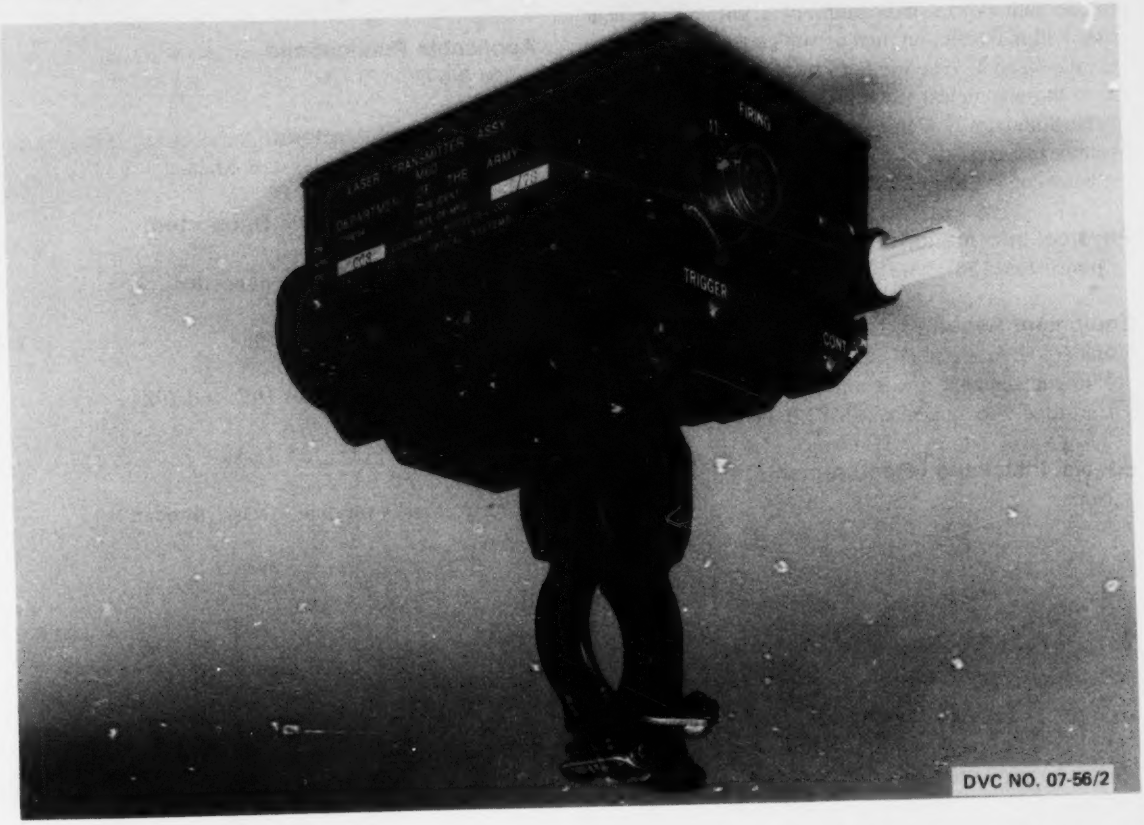
SM Tasks

All tactical tasks for skill levels 1 through 5.

SIMULATOR SYSTEM, FIRING, LASER: M60 MACHINEGUN

DVC 07-56/2
M61

NSN 1265-01-092-7665



DVC NO. 07-56/2

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

AMCCOM

Source and Method of Obtaining:

Available through local TASCs

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machineguns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The MILES family, consisting of nine different weapon fire simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machineguns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live

DVC 07-56/2

ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Simulator System, Firing, Laser, M61 for M60 Machinegun consists of a laser transmitter mounted on the barrel of the M60 Machinegun.

Physical Information:
Transit case: 26" x 13" x 13"

Equipment Required, Not Supplied:
Battery, BA 3090 (9V, transister)
Firing attachment, blank ammunition, M13A1
Cartridge, 7.62mm blank, M82 linked with M13 link

Special Installation Requirements:
None

Power Requirements:
9 vdc

Applicable Publications:
TM 9-6920-370-10-2

Reference Publications:
Applicable Weapon System Manual

Training Requirements Supported:

ARTEPs Supported

7-15 17-55 71-2

MOSC 11B, 11Z, 19D, 19E, and 19Z

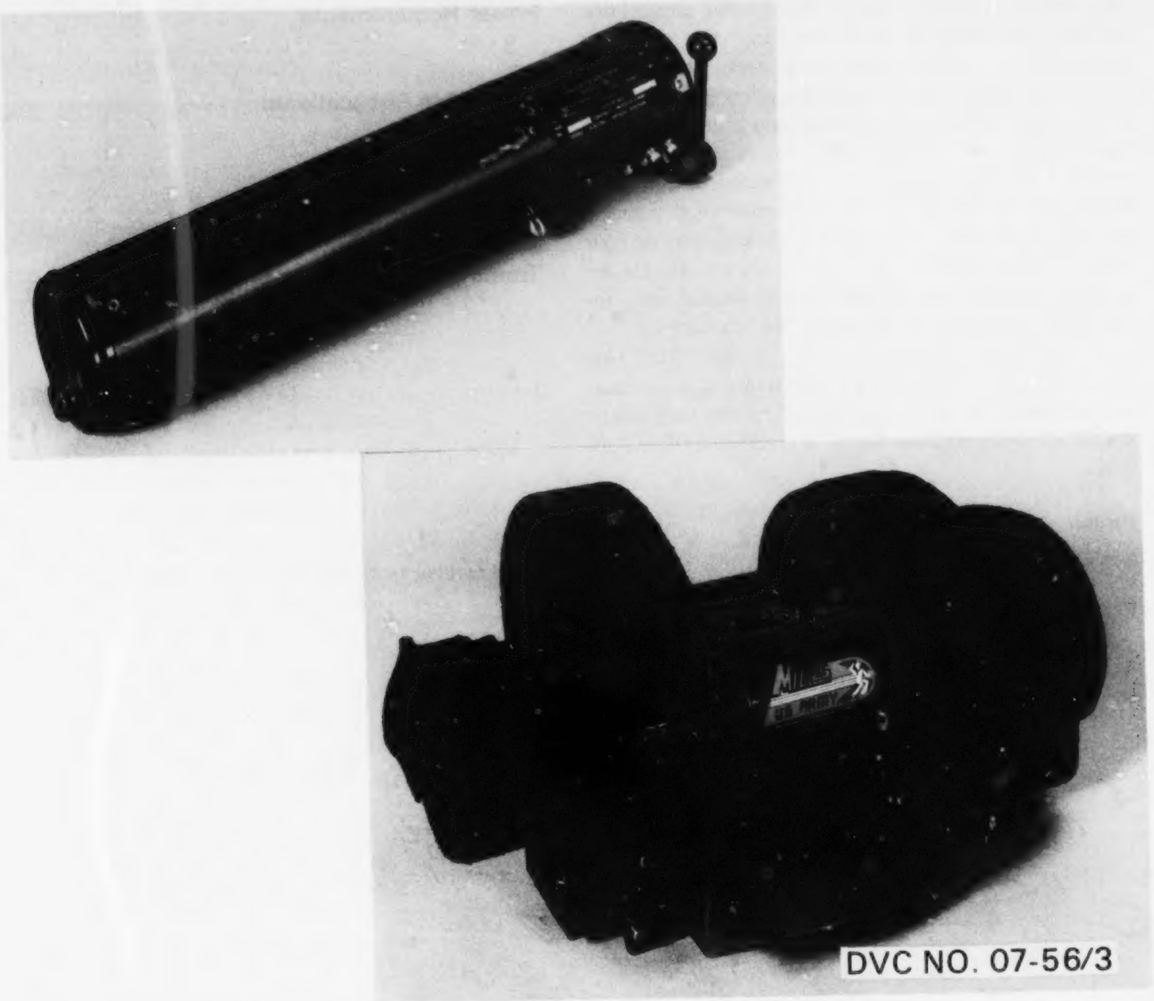
SM Tasks

All tactical tasks for skill levels 1 through 5.

SIMULATOR SYSTEM, FIRING, LASER: DRAGON

DVC 07-56/3
M62

NSN 1265-01-090-0103



DVC NO. 07-56/3

Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASCs

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machineguns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons. The specific training requirements supported are shown following the descriptive data.

DVC 07-56/3

Functional Description:

The MILES family, consisting of nine different weapon fire simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machineguns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Simulator System, Firing, Laser, M62 for DRAGON Missile consists of a laser transmitter mounted in a simulated DRAGON tracker and an anti-tank weapons effect simulator mounted in a simulated DRAGON tube.

Physical Information:

Transit case: 47" x 23" x 20"

Equipment Required, Not Supplied:

Battery, BA 3090 (9V, transistor)

Special Installation Requirements:

None

Power Requirements:

9 vdc

Applicable Publications:

TM 9-6920-368-10-1

Reference Publications:

Applicable Weapon System Manual

Training Requirements Supported:

ARTEPs Supported

7-15 17-55 71-2

MOSC 11B, 11Z, 19D, 19E, and 19Z

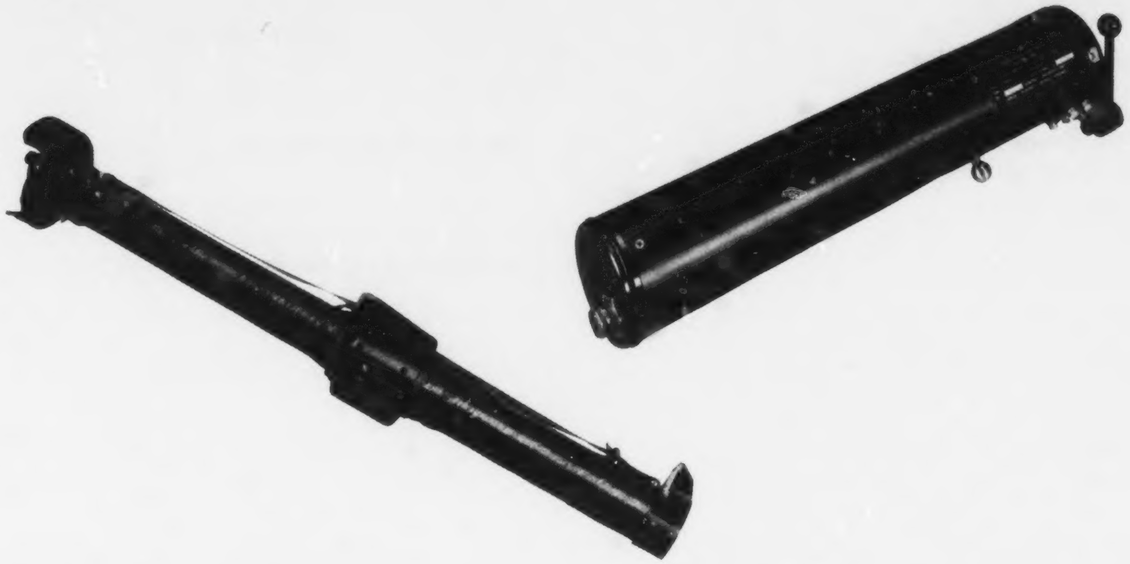
SM Tasks

All tactical tasks for skill levels 1 through 5.

SIMULATOR SYSTEM, FIRING, LASER: VIPER

DVC 07-56/4
M68

NSN 1265-01-077-6079



Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASCs

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machineguns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The MILES family, consisting of nine different weapon fire simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machineguns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Simulator System, Firing, Laser, M68 for VIPER Rocket consists of a laser transmitter mounted in the front of a simulated tube and an antitank weapons effect simulator mounted in the rear of the dedicated tube.

Physical Information:
Transit case: 50'' x 21'' x 13''

Equipment Required, Not Supplied:
Battery, BA 3090 (9V, transistor)

Special Installation Requirements:
None

DVC 07-56/4

Power Requirements:
9 vdc

Applicable Publications:
TM 9-6920-368-10-3

Reference Publications:
Applicable Weapon System Manual

Training Requirements Supported:

ARTEPs Supported

7-15	17-55	71-2

MOSC 11B, 11Z, 19D, 19E, and 19Z

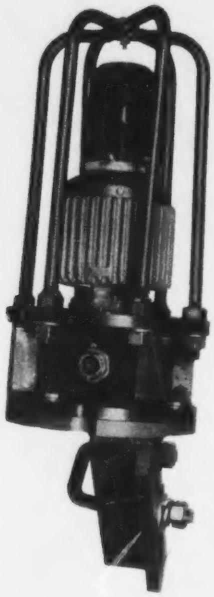
SM Tasks

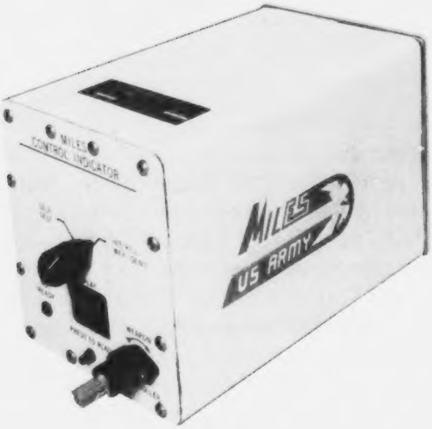
All tactical tasks for skill levels 1 through 5.

SIMULATOR SYSTEM, FIRING, LASER: M113 APC

DVC 07-56/5
M63

NSN 1265-01-077-6082





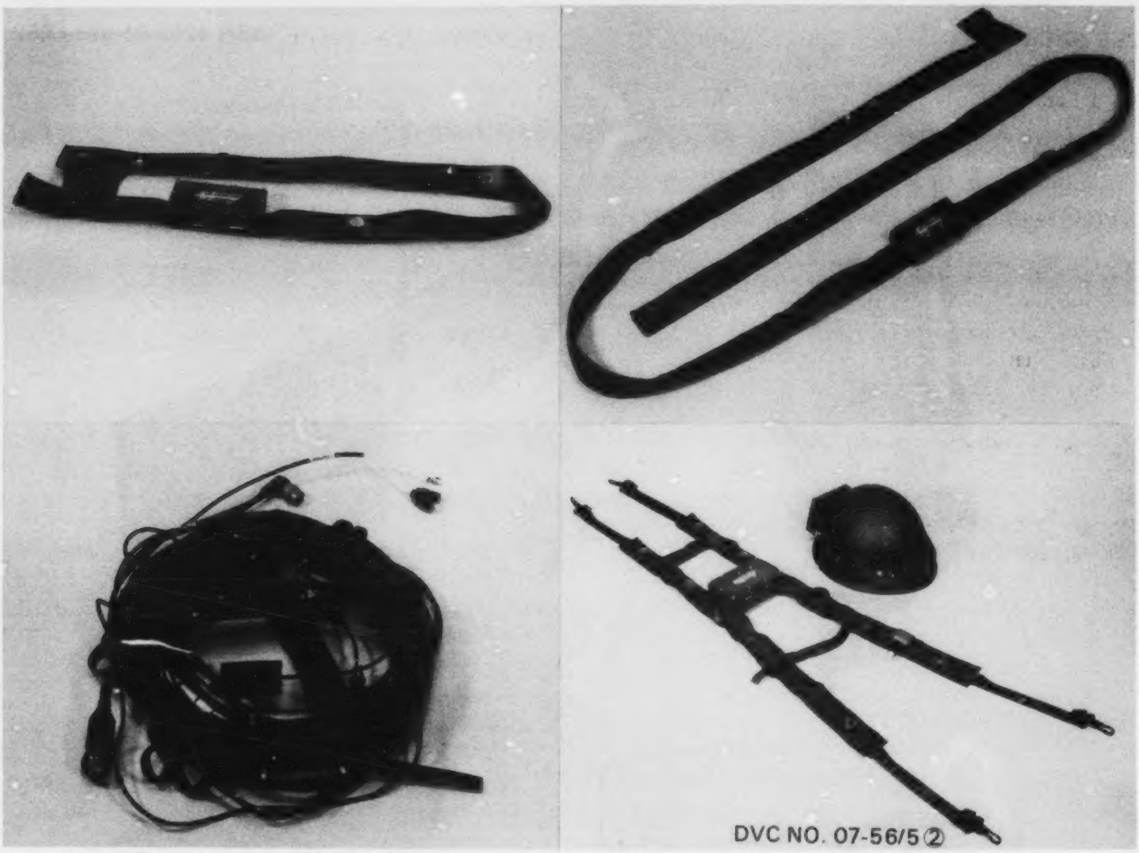
Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASCs

Purpose of Trainer:
The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

DVC 07-56/5



DVC NO. 07-56/5②

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machineguns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The MILES family, consisting of nine different weapon fire simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machineguns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Simulator System, Firing, Laser, M63 for M113 APC consists of a laser transmitter mounted on the barrel of the M2 Machinegun, detector belt segments on all four sides of the vehicle, a vehicle kill indicator mounted on top of the vehicle, and a man-worn detector assembly installed on a load-carrying harness and a strap which fits over a standard issue steel helmet.

When the laser detector belts are struck by a laser beam, one of three things will happen: the strobe, mounted on top of the vehicle, will flash continuously indicating a kill; will flash four times indicating a hit; or will flash two times indicating a near miss. To deactivate the strobe if a kill occurs, the weapon key from the vehicle's machinegun transmitter must be removed and put into a receptacle on the control console located in the vehicle.

DVC 07-56/5

With the key removed from the machinegun transmitter, the transmitter is inoperable. All other vehicle transmitters are automatically turned off after a kill.

Physical Information:

Transit case: 36" x 35" x 16"
M113 rails: 55" x 15" x 15"

Equipment Required, Not Supplied:

Battery, BA 3090 (9V, transistor)
Battery BA 200 (6V, lantern)
Firing attachment, blank ammunition, M19
Cartridge, 50 caliber blank, for M2 Machinegun

Special Installation Requirements:

None

Power Requirements:

6 vdc and 9 vdc

Applicable Publications:

TM 9-6920-370-10-3

Reference Publications:

Applicable Weapon System Manual

Training Requirements Supported:

ARTEPs Supported

7-15 17-55 71-2

MOSC 11B, 11Z, 19D, 19E, and 19Z

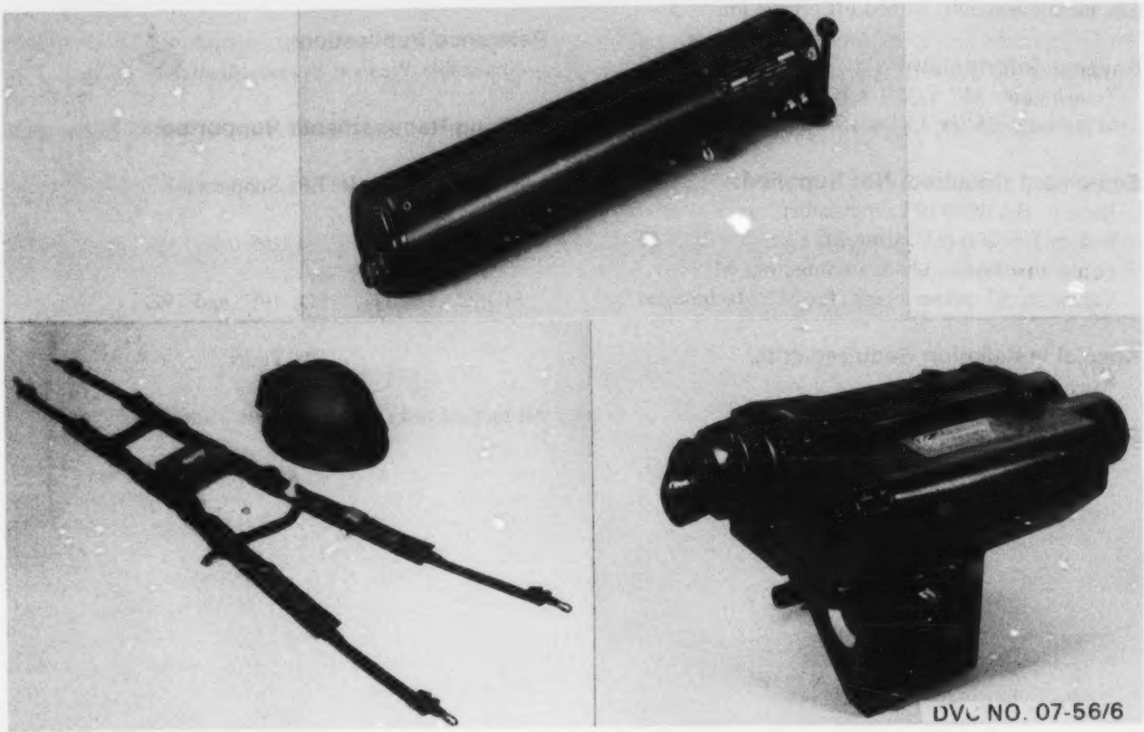
SM Tasks

All tactical tasks for skill levels 1 through 5.

SIMULATOR SYSTEM, FIRING, LASER: TOW

DVC 07-56/6
M64

NSN 1265-01-077-6083



DVC NO. 07-56/6

Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASCs

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machineguns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The MILES family, consisting of nine different weapon fire simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machineguns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

DVC 07-56/6

The Simulator System, Firing, Laser, M64 for TOW consists of a laser transmitter resembling a TOW tracker head which completely replaces the actual TOW tracker head, an antitank weapons effect simulator and detector mounted in a simulated TOW tube, and two man-worn detector assemblies installed on load-carrying harnesses and straps which fit over standard issue steel helmets.

Physical Information:
Transit case: 33" x 29" x 19"

Equipment Required, Not Supplied:
Battery, BA 3090 (9V, transistor)

Special Installation Requirements:
None

Power Requirements:
9 vdc

Applicable Publications:
TM 9-6920-368-10-2

Reference Publications:
Applicable Weapon System Manual

Training Requirements Supported:

ARTEPs Supported

7-15 17-55 71-2

MOSC 11B, 11Z, 19D, 19E, and 19Z

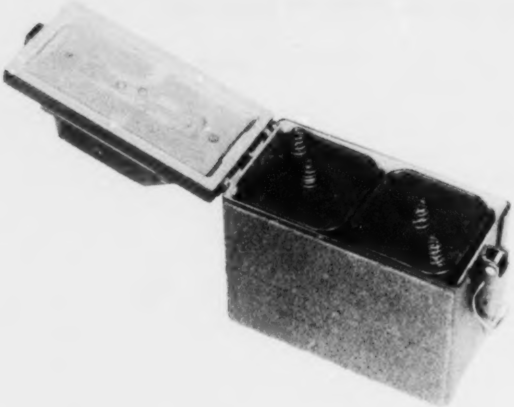
SM Tasks

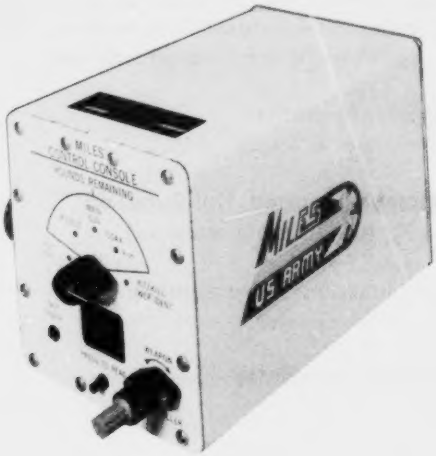
All tactical tasks for skill levels 1 through 5.

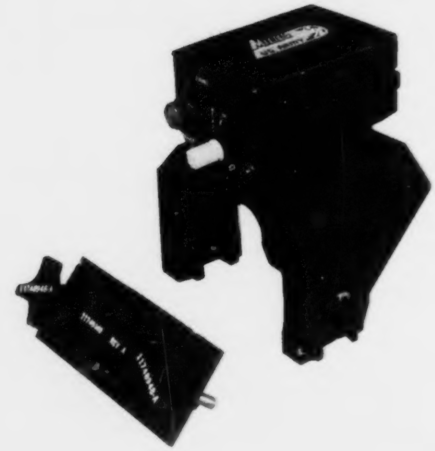
SIMULATOR SYSTEM, FIRING, LASER: M60A1/A3 TANKS

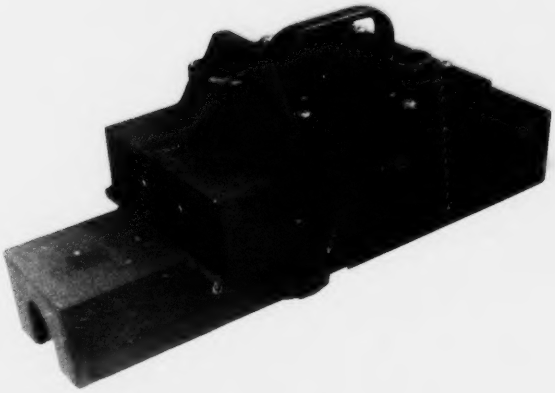
DVC 07-56/7
M65

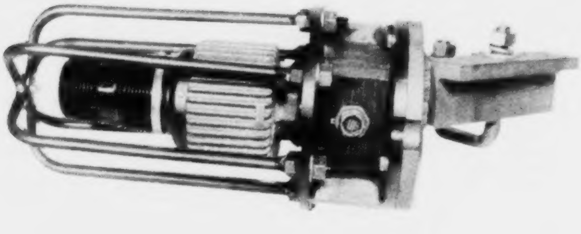
NSN 1265-01-077-0680



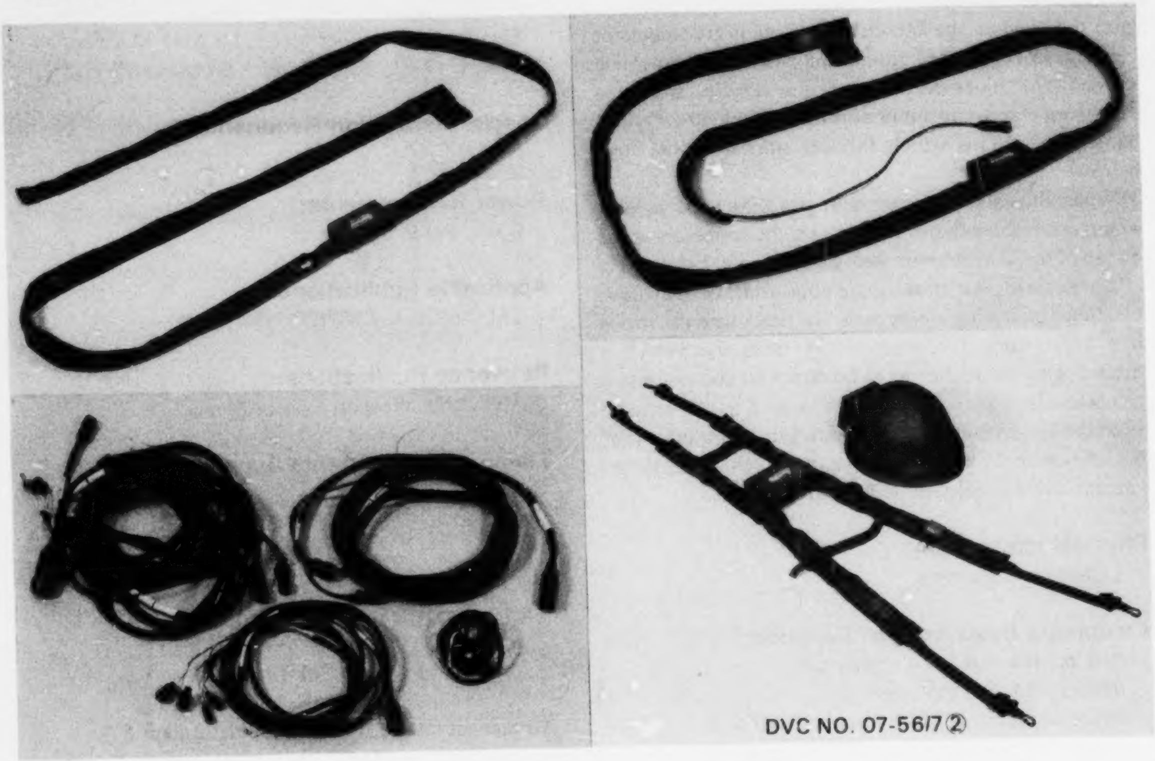

MILES
CONTROL CONSOLE
ROUNDS REMAINING
MILES
US ARMY







DVC 07-56/7


DVC NO. 07-56/7②

Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASCs

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machineguns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The MILES family, consisting of nine different weapon fire simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machineguns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Simulator System, Firing, Laser, M65 for M60A1/A3 Tank consists of a laser transmitter mounted on the barrel of the M85 Machinegun, two laser transmitters (one for the 105mm gun and one for the coaxial machinegun) mounted in the breech of the main gun, detector belt segments mounted around the tank turret, a vehicle kill indicator mounted on top of the vehicle, and three man-worn detector assemblies installed on load-carrying-harness and straps which fit over standard issue steel helmets.

When the laser detector belts are struck by a laser beam, one of three things will happen: the strobe, mounted on top of the vehicle, will flash continuously indicating a kill; will flash four times indicating a hit; or will flash two times indicating a near miss. To deactivate the strobe if a kill occurs, the weapon key from the vehicle's machinegun transmitter must be removed and put into a receptacle on the control console located in the vehicle. With the key removed from the machinegun transmitter, the transmitter is inoperable. All other vehicle transmitters are automatically turned off after a kill.

Physical Information:
Transit case: Pending

Equipment Required, Not Supplied:
Battery, BA 3090 (9V, transistor)
Battery, BA 200 (6V, lantern)
Firing attachment, blank ammunition, M20
Cartridge, 50 caliber blank, for M85 Machinegun
Device 17-61, Tank Gunfire Simulator (WESS)

Special Installation Requirements:
None

Power Requirements:
6 vdc and 9 vdc

Applicable Publications:
TM 9-6920-369-10-1

Reference Publications:
Applicable Weapon System Manual

Training Requirements Supported:

ARTEPs Supported

7-15 17-55 71-2

MOSC 11B, 11Z, 19D, 19E, and 19Z

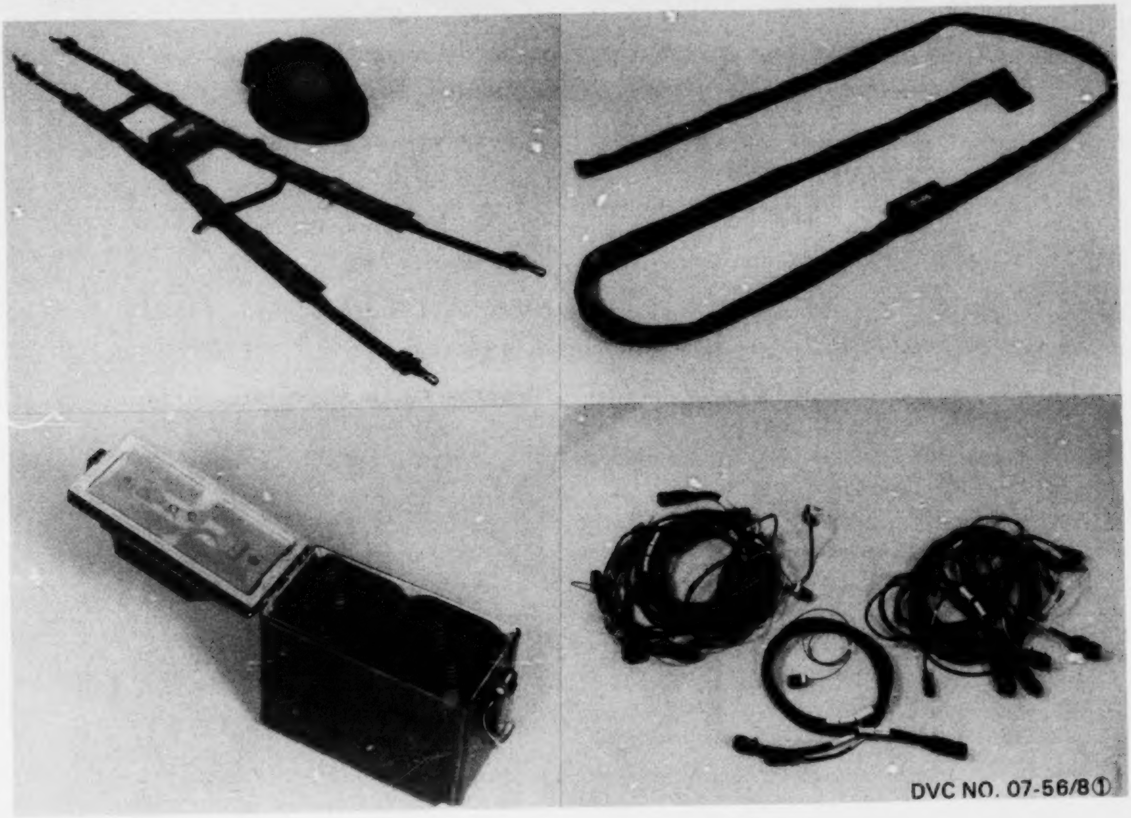
SM Tasks

All tactical tasks for skill levels 1 through 5.

SIMULATOR SYSTEM, FIRING, LASER: M551 AR/AAV

DVC 07-56/8
M67

NSN 1265-01-077-0681



DVC NO. 07-56/8①

Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASCs

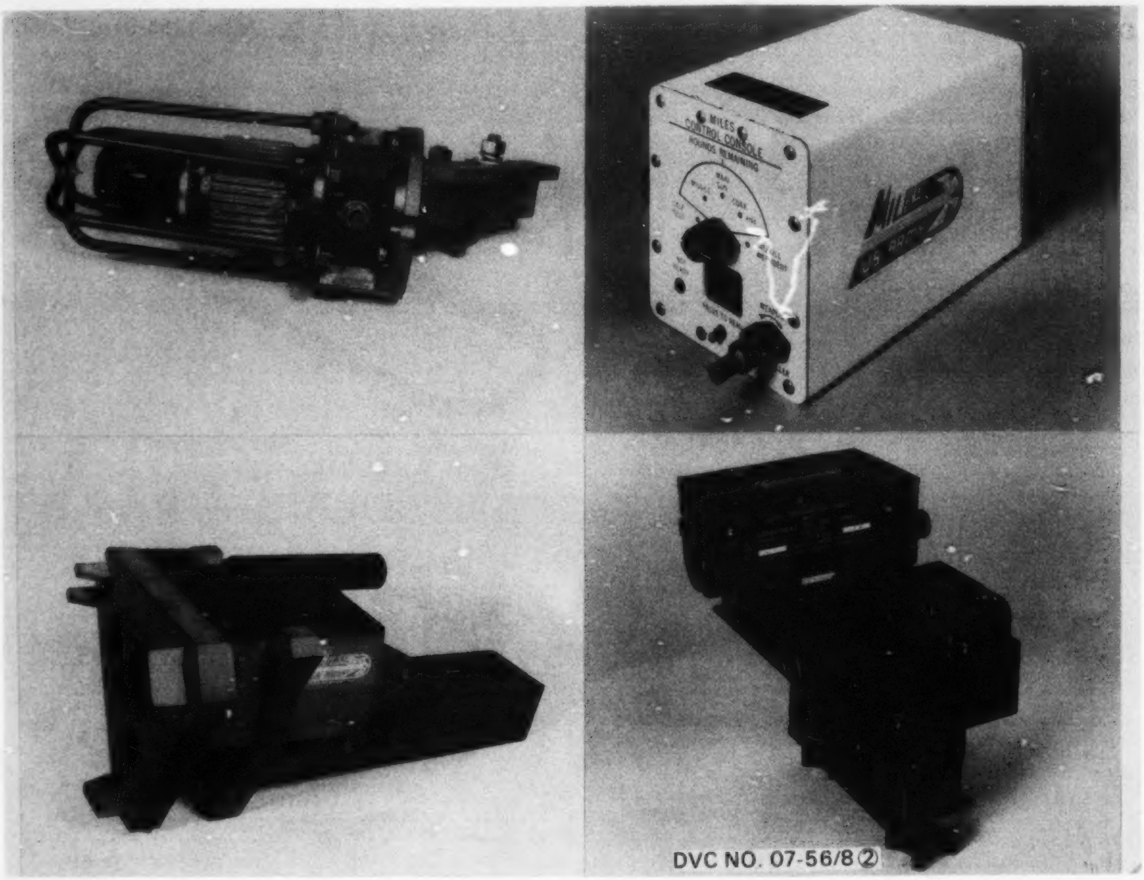
Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machineguns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The MILES family, consisting of nine different weapon fire simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machineguns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live



DVC NO. 07-56/8②

ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Simulator System, Firing, Laser, M67 for the M551 consists of a laser transmitter mounted on the barrel of the M2 Machinegun, three laser transmitters contained in a single housing (one for the 152mm gun, one for the Shillelagh missile, and one for the coaxial machinegun) mounted in the breech of the main gun, detector belt segments mounted around the tank turret, a vehicle kill indicator mounted on top of the vehicle, and three man-worn detector assemblies installed on load-carrying harnesses and straps which fit over standard issue steel helmets.

When the laser detector belts are struck by a laser beam, one of three things will happen: the strobe, mounted on top of the vehicle, will flash continuously indicating a kill; will flash four times indicating a hit; or will flash two times indicating a near miss. To deactivate the strobe if a kill occurs, the weapon key from the vehicle's machinegun transmitter must be removed and put into a receptacle on the control console located in the vehicle. With the key removed from the machinegun transmitter, the transmitter is inoperable. All other vehicle transmitters are automatically turned off after a kill.

Physical Information:

Pending

Equipment Required, Not Supplied:

Battery, BA 3090 (9V, transistor)
Battery, B200 (6V, lantern)
Firing attachment, blank ammunition, M19
Cartridge, 50 caliber blank, for M2 Machinegun
Device 17-61, Tank Gunfire Simulator (WESS)

DVC 07-56/8

Special Installation Requirements:
None

Power Requirements:
6 vdc and 9 vdc

Applicable Publications:
TM 9-6920-369-10-3

Reference Publications:
Applicable Weapon System Manual

Training Requirements Supported:

ARTEPs Supported

7-15 17-55 71-2

MOSC 11B, 11Z, 19D, 19E, and 19Z

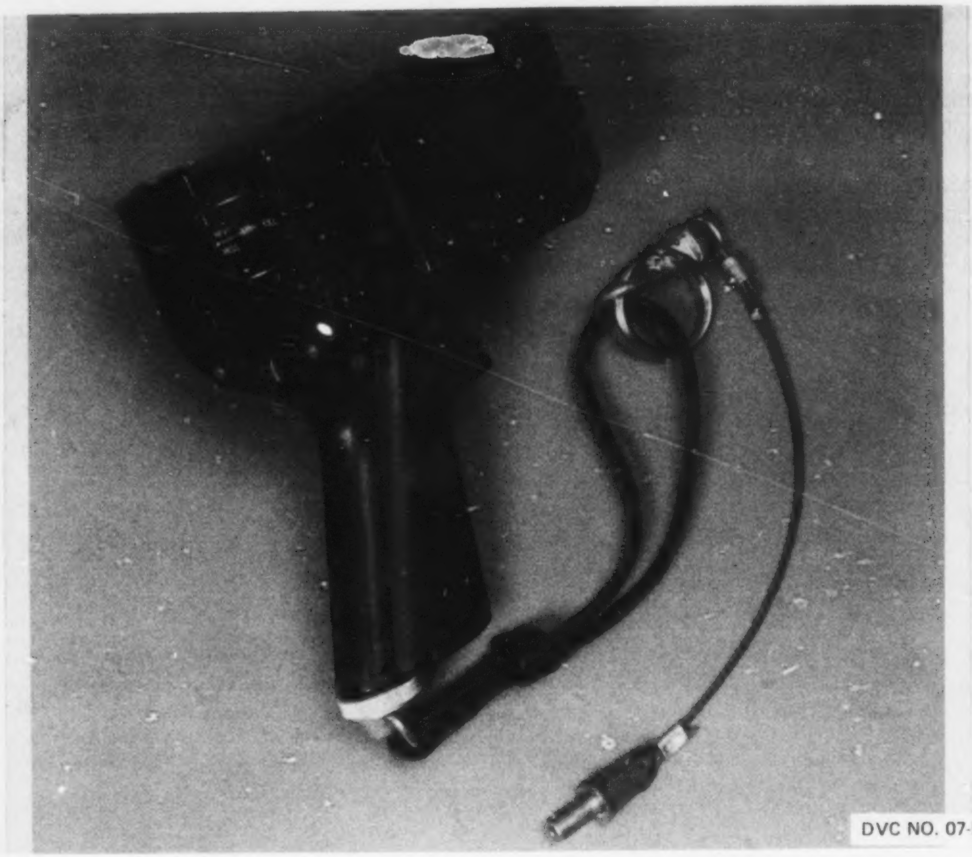
SM Tasks

All tactical tasks for skill levels 1 through 5.

CONTROLLER'S GUN, SIMULATOR SYSTEM, LASER

DVC 07-56/9
M251

NSN 1265-01-092-0891



DVC NO. 07-56/9

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

AMCCOM

Source and Method of Obtaining:

Available through local TASCs

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machineguns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons.

Functional Description:

The MILES family, consisting of nine different weapon fire simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machineguns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Controller's Gun, Simulator System, Laser, M251 is required to ascertain the status of any laser detector. The gun contains a laser, and a ''near miss'' or ''kill'' switch. In the ''kill'' position it serves as the controller's weapon to circumvent any cheating during exercises. If the ''near miss'' position it serves as a means of testing the detectors.

Physical Information:
Transit case: 29'' x 28'' x 13''

Equipment Required, Not Supplied:
Battery, BA 3090 (9V, transistor)

Special Installation Requirements:
None

Power Requirements:
9 vdc

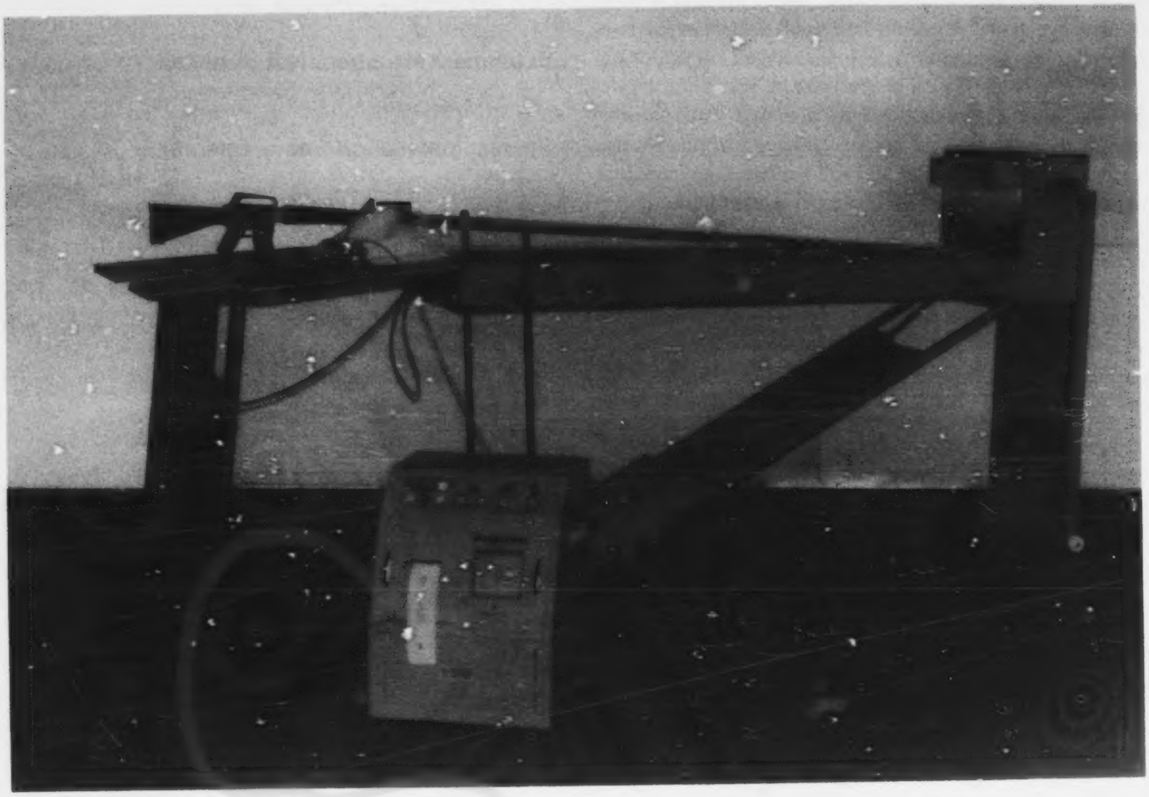
Applicable Publications:
TM 9-6920-371-14 and P

Reference Publications:
None

RIFLE MARKSMANSHIP TRAINER

DVC 07-57

NSN 6920-01-092-7735



Training Category/Level Utilized:
Infantry/Level 2

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The Rifle Marksmanship Trainer allows diagnosis of M16A1 rifleman's firing problems and provides remedial training without using ball ammunition or range facilities. The specific training requirements supported are shown following the descriptive data.

Function Description:

This device is an indoor M16A1 remedial rifle marksmanship trainer designed to isolate and correct individual trainee deficiencies identified during basic rifle marksmanship (BRM) instruction. The device provides a 25 meter zero and E type silhouette target scenario scaled to simulate firing at real ranges of 100 to 250 meters. The targets function in both automatic (kill) and manual (no-kill) modes of operation. The device also provides a sequential target exposure capability and timed firing sequence mode of operation. The control console provides a visual display (CRT) of the firer's shot signature to include a transient (electronic trace) of point of aim. The firing station provides recoil simulation in both single shot and automatic firing modes with variable energy setting as well as adjustable sound simulation.

DVC 07-57

Physical Information:

Range assembly with cables and M16A1 Rifle: 99'' x 29'' x 7''; 119 lb

Target assembly with cover: 17'' x 29'' x 24''; 64 lb.

Display console with accessories: 23'' x 29'' x 32''; 94 lb.

Firing pad: 99'' x 24'' x 1'' ; 45 lb.

Foxhole pads: 88'' x 25'' x 1''; 75 lb.

Elevator guide rack: 3'' x 26'' x 61''; 21 lb.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Training area (shielded from elements); minimum - 72'' wide x 216'' long x 96'' high

Power Requirements:

110 vac, single phase, 60 cycle

Applicable Publications:

TM 7-6920-703-14&P
TV tapes: 2E1010-071-1182B
2E1010-071-1183B

Reference Publications:

TM 9-1005-249 Series
FM 23-9

Training Requirements Supported:

ARTEP Task

8-28-F

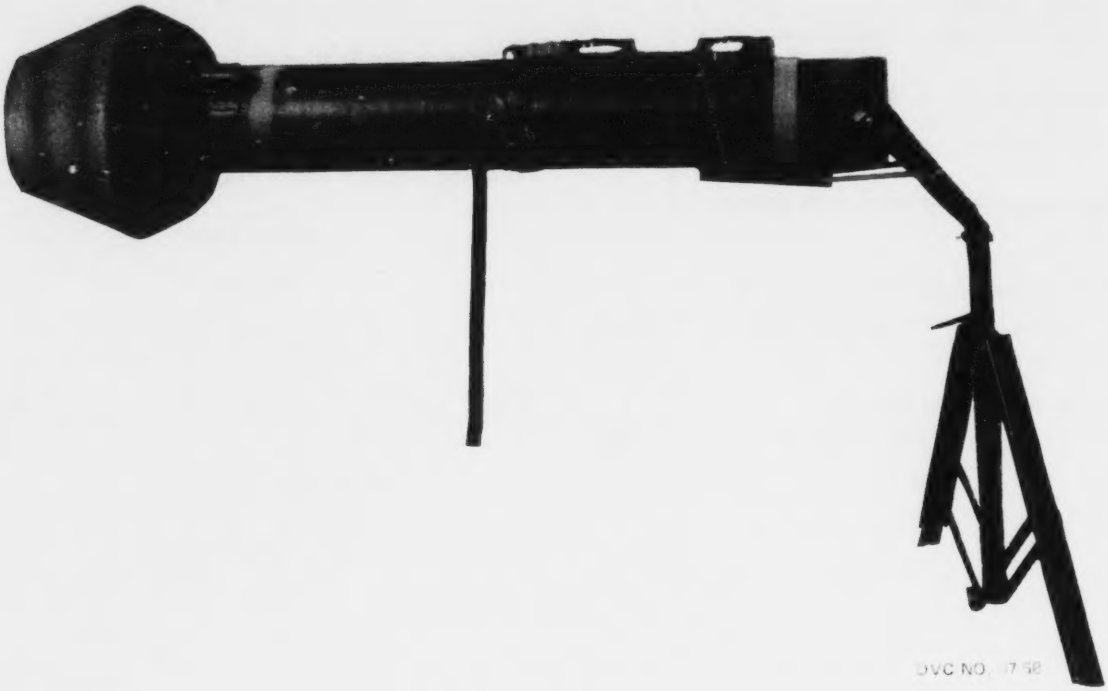
SM 071-11A Tasks

2004	2005	2304

DRAGON FIELD HANDLING TRAINER

DVC 07-58
M57

NSN 6920-00-339-1042



Training Category/Level Utilized:

Infantry/Levels 1, 2, and 3

Logistic Responsible Command, Service, or Agency:

MICOM

Source and Method of Obtaining:

Available at local TASCs.

Purpose of Trainer:

This device is currently used to represent the actual DRAGON Missile and give the gunner training in setting up and transporting the DRAGON weapon. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The Field Handling Trainer is an inert round which simulates the DRAGON tactical round in weight and configuration and is used in lieu of an actual round or the launch effects trainer in field handling exercises in order to prevent unnecessary damage to them.

The field handling trainer is assembled by installing a weight simulator kit M8E2 in an expended launcher tube which has been certified free of all explosives and propellant by qualified ammunition inspectors. Installation instructions are found in TC 23-24 with change 1.

Physical Information:

44" x 38" (min) — 51" (max) x 10" (dia); 11 lb

DVC 07-58

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
TC 23-24 with Change 1

Reference Publications:
TC 23-24
TM 9-6920-480 Series
TM 9-1425-480-10

Training Requirements Supported:

ARTEP Tasks

8-4B 8-34B

MOSC 11B

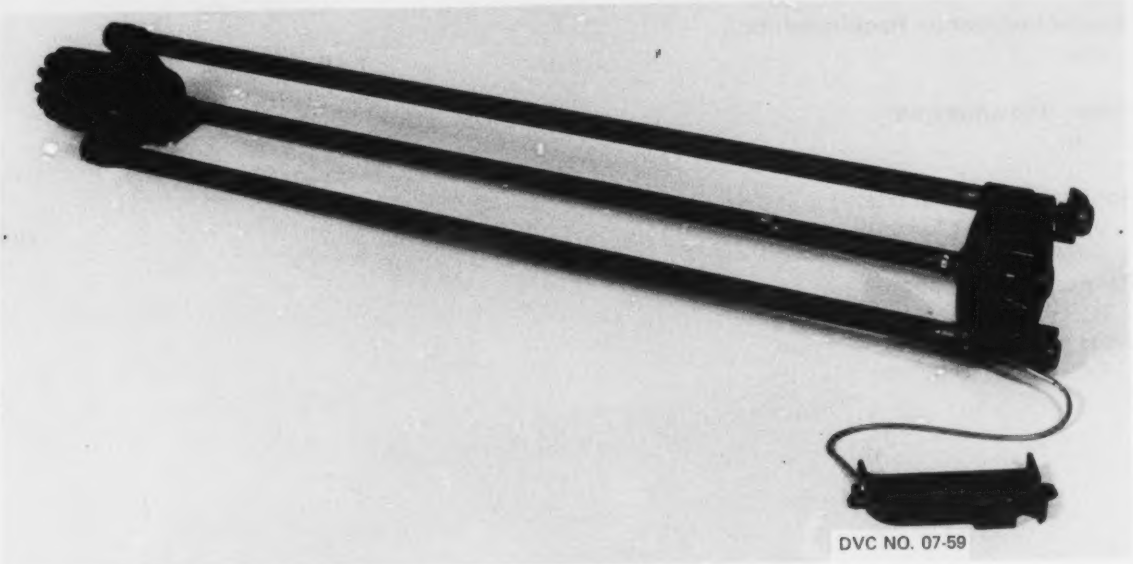
SM 071-317 Tasks

3301 3302 3304 3306

FIRING ATTACHMENT, BLANK AMMUNITION: M2 MACHINE GUN

DVC 07-59
M19

NSN 1005-01-091-7510



DVC NO. 07-59

Training Category/Level Utilized:
Combat ARMS/Level 3

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASC's or DISCOM's.

Purpose of Trainer:
The device permits firing of linked blank .50 caliber ammunition with the M2 machine gun. It will function as the weapon effect signature simulator for the M2 machine gun in engagement simulation systems such as the Multiple Integrated Laser Engagement System (MILES).

Functional Description:
The firing attachment consists of one muzzle restriction with orifice, three spacer rods, one support, attaching hardware and guide assembly. It allows the weapon to function by restricting the gas flow at the muzzle end of the barrel. The guide assembly is used to act as a spacer to assure proper feeding of a live round of ammunition into the feedway. The attachment is designed to fire the product improved M1A1 blank ammunition.

Physical Information:
Length: 33''; Diameter: 5''

Equipment Required; Not Supplied:
M2 Machine Gun; M1A1 Blank Ammunition

Special Requirements:
None

Power Requirements:
None

Applicable Publications:
TM 9-6920-434 12 & P

Referenced Publications:
Applicable Weapon System Manual

Training Requirements Supported:

ARTEP Task

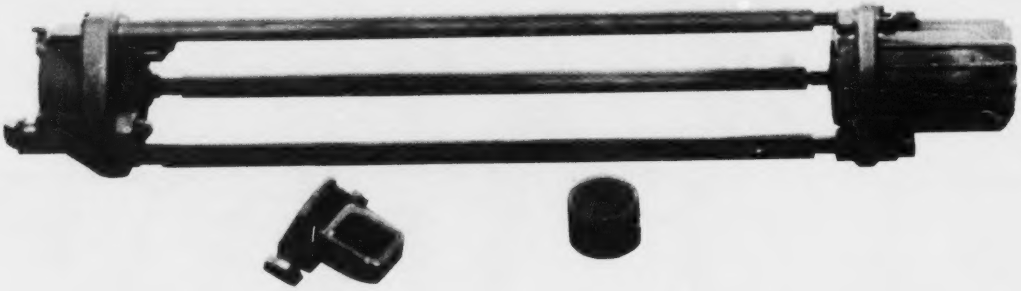
7-15, 17-55, 71-2

MOSC 11B, 11Z, 19D, 19E, and 19Z; SM Tasks; All tactical tasks for skill levels 1 through 5.

FIRING ATTACHMENT, BLANK AMMUNITION: M85 MACHINE GUN

DVC 07-60
M20

NSN 1005-01-090-4246



Training Category/Level Utilized:
ARMOR/LEVEL 3

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASC's and DISCOM's.

Purpose of Trainer:

The device permits firing of linked blank .50 caliber ammunition with the M85 Machine Gun. It will function as the weapons effect signature simulator for the M85 machine gun in engagement simulation systems such as the Multiple Integrated Laser Engagement Systems (MILES).

Functional Description:

The firing attachment consists of one muzzle restrictor with orifice, three space rods, one support, attaching hardware and guide assembly. It allows the weapon to function by restricting the gas flow at the muzzle end of the barrel. The guide assembly is used to act as a spacer to insure proper feeding of blank ammunition and prevents feeding of a live round of ammunition into the feedway. The attachment is designed to fire the product improved M1A1 blank ammunition.

Physical Information:
Length: 27''; Diameter: 6''

Equipment Required, Not Supplied:
M85 Machine Gun; M1A1 Blank Ammunition

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
TM 9-6920-444-12 & P

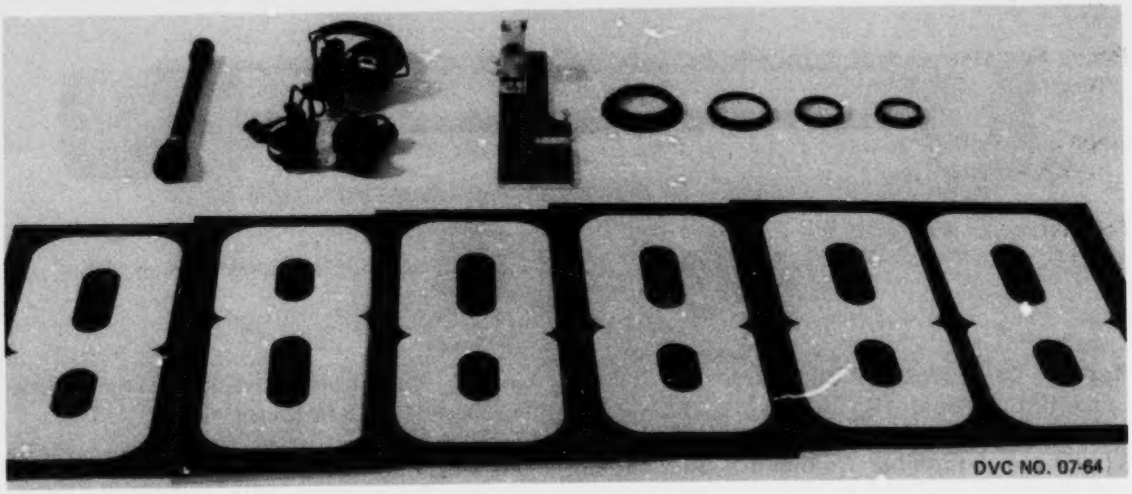
Reference Publications:
Applicable Weapon System Manual

Training Requirements Supported:

ARTEPs Supported, 7-15, 7-55, 71-2; MOSC 11B, 11Z, 19D, 19E, and 19Z SM Tasks, All tactical tasks for skill levels 1 through 5.

MONITORING KIT, SIMULATED ANTITANK ENGAGEMENT MK-1778/G

DVC 07-64 NSN 1015-01-024-9644



Training Category/Level Utilized:
Infantry/Level 3

Logistic Responsible Command, Service, or Agency:
CECOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To add realism to field training exercises of two opposing small-unit forces and to provide a creditable system to assess casualties in the training environment at company level or below. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The system is designed to use fixed focal length, 10 power or plastic sighting plates mounted on or in direct fire antitank weapons from the M72 LAW to the TOW of two opposing forces. These devices are alined with the weapons' sights, allowing controllers to see the same sight picture as gunners, and permitting them to verify a gunner's aim during target engagements. Gunners ''shoot'' at targets by announcing the identfication numbers displayed on vehicles while the target is alined in their sights. The controllers verify aim and award ''hits'' or ''misses''. This data is transmitted by the controller via the controller command package.

The device consists of the following:
Headset-microphone H- 161 C/V
Telescope - 10X (fixed focal length)
* Breach mount, TOW/106mm
* Nontelescopic plastic disks for M72, (LAW)
* Nontelescopic plastic disks for M67, 90mm
* Number sets, panel, vehicle 2 digit

Note: Items with an asterisk are not in the Federal supply system but are replaced through the TASC system.

Physical Information:
Varies among components

Equipment Required, Not Supplied:
Radio Set, PRC-77
Binoculars, M17A1
TOW/106RR, M72 (LAW), M67, 90mm Recoilless Rifle

DVC 07-64

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
Department of the Army Training Circular 71-5

Reference Publications:
TM 11-5965-262-13

Training Requirements Supported:

ARTEPs Supported

71-2 7-15 17-55

MOSC 11B, 19D, and 19E

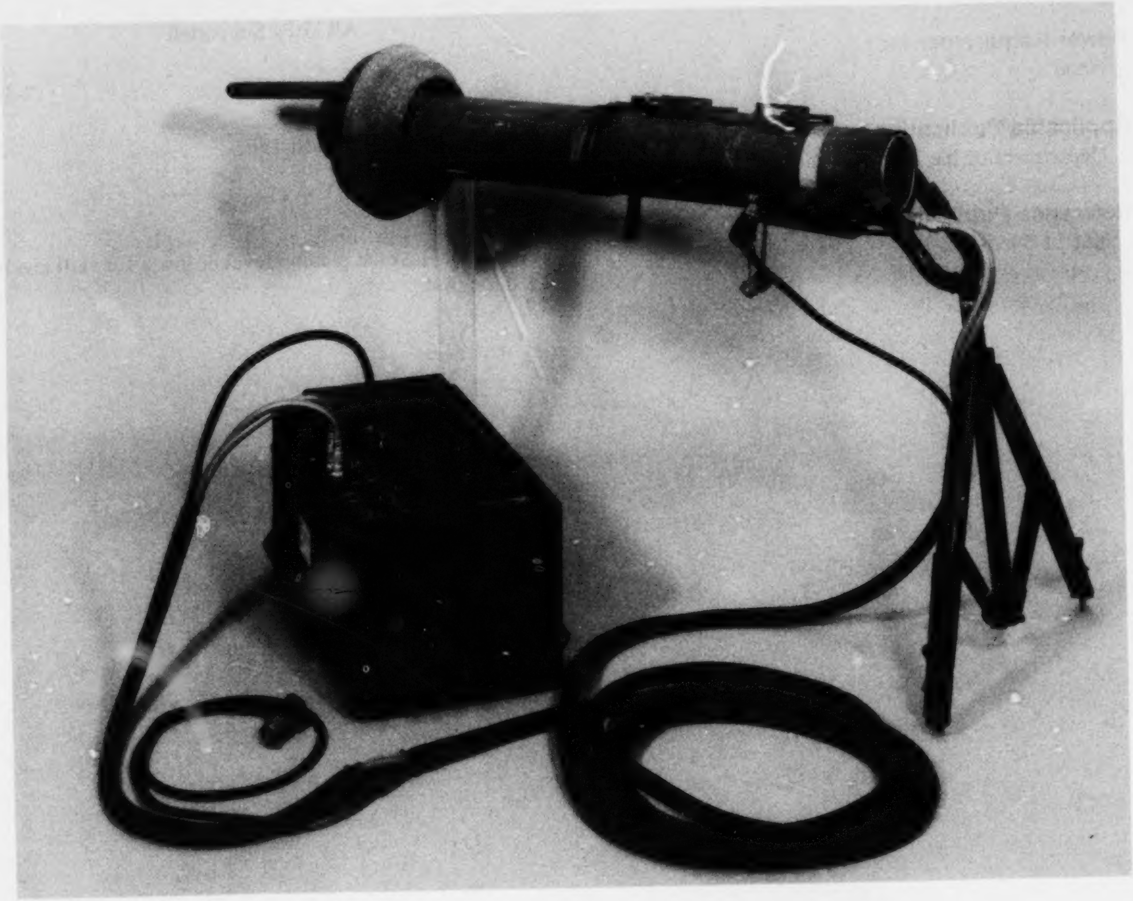
SM Tasks

All tactical tasks at platoon level or lower for skill levels 1 through 4.

DRAGON LAUNCH ENVIRONMENT SIMULATOR (LES)

DVC 07-71

NSN None



Training Category/Level Utilized:
Infantry/Level 3

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Available thru local TASC's.

Purpose of Trainer:
This device produces a realistic blast, heat, recoil, and noise effect of a live-firing of the dragon weapon. It is used to acclimate troops to the actual weapon without expending ammunition.

Functional Description:
The Dragon LES operated by the combustion of a flammable gas mixture in an enclosed tube (launcher) which ignites with sufficient blast effect to blow off biodegradable end caps. These, in turn, produce debris and a smoke effect. Readily available industrial gases are used: oxygen and methylacetylene propadiene propane propylene (MAPP). A battery-activated control box sends the electrical charge to a glow plug in the launcher for ignition. Either a Tracker, Infrared, Guided Missile, or a Night-Vision Sight Tracker, Infrared, is required for system activation. These are provided by the organizational unit. If gunners are to be graded on gunner accuracy, a Monitoring Set and Infrared Transmitting Set will be required. These are provided by the organizational unit.

DVC 07-71

Physical Information:

Launcher: 40'' long x 5.1'' diameter. Height (bipod retracted) 29.42''
Height (bipod extended) 42.56''. Weight is 30.8 lb.

Control Box: 21.5'' long x 12'' wide x 10'' high. Weight is 60 lb.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

This device is installed in an outdoor area, cleared for a minimum of 50 meters in all directions. Prescribed safety precautions must be followed.

Power Requirements:

None

Applicable Publications:

NAVTRADEV P-6054 with Change 1

Reference Publications:

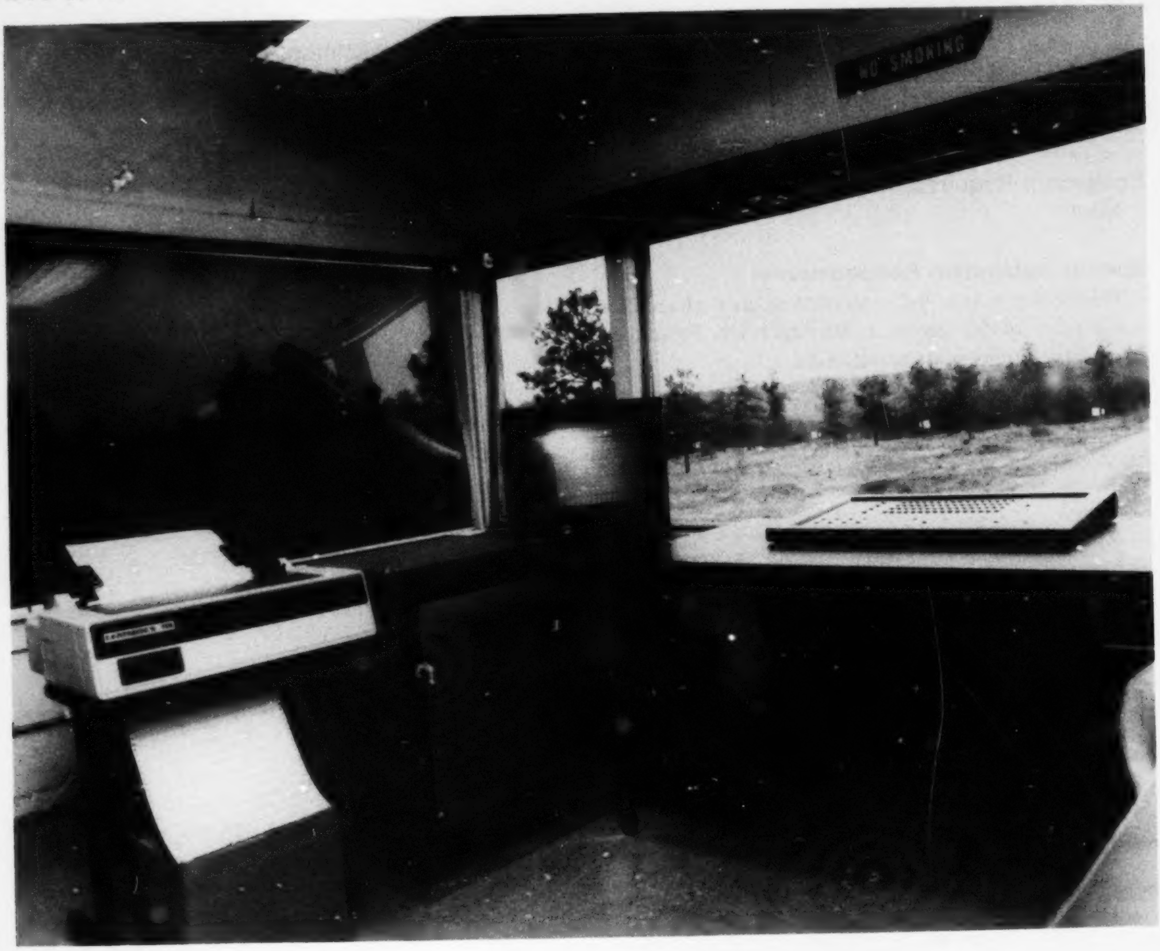
None

Training Requirements Supported:

DISAPPEARING AUTOMATIC RETALIATORY TARGET SYSTEM (STATIC-DAY FIRING)

DVC 07-72

NSN 6920-01-067-1675



Training Category/Level Utilized:
Infantry/Level 2

Logistic Responsible Command, Service or Agency:
PM TRADE

Source and Method Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To train infantry personnel in rifle marksmanship and qualifications under combat type conditions, on an outdoor firing range. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The Static Disappearing Automatic Retaliatory Target (DART) System is configured for a small arms day record fire range with targets located on 16 lanes that are 30 meters wide and six range increments which are 50 meters apart. Buried hardwire cabling is used for signal and power control. The system is manually programmed for automatic operation, hit indication, and score recording. Programming is accomplished by presetting volatile logic circuitry. The target mechanisms use standard silhouette targets and are operated by 110-volt motors. The target automatically lowers when a hit is scored. The console provides system programming, operator control (automatic and manual), range status, and hit recording display. The console display lights indicate target hits, up, down,

and range status, and hit recording display. The console display lights indicate target hits, up, down, and range operating mode. Running totals and bank scores by individual lanes are provided by digital displays. Hard copy score printout is available from a CENTRONIX PRINTER.

Physical Information:

72" x 48" x 25"; 500 lb

Equipment Required, Not Supplied:

Silhouette targets (See reference publications)

Special Installation Requirements:

Outdoor firing range. MCA funding may be required. Exact cost must be determined on an individual basis according to nature of terrain, magnitude of range, inflation factors, and procurement procedures.

Power Requirements:

110 vac, 60 cycle

Applicable Publications:

Commercial manual

Reference Publications:

TM 9-6920-210 Series (Targets)

Training Requirements Supported:

ARTEP Task

8-28-F

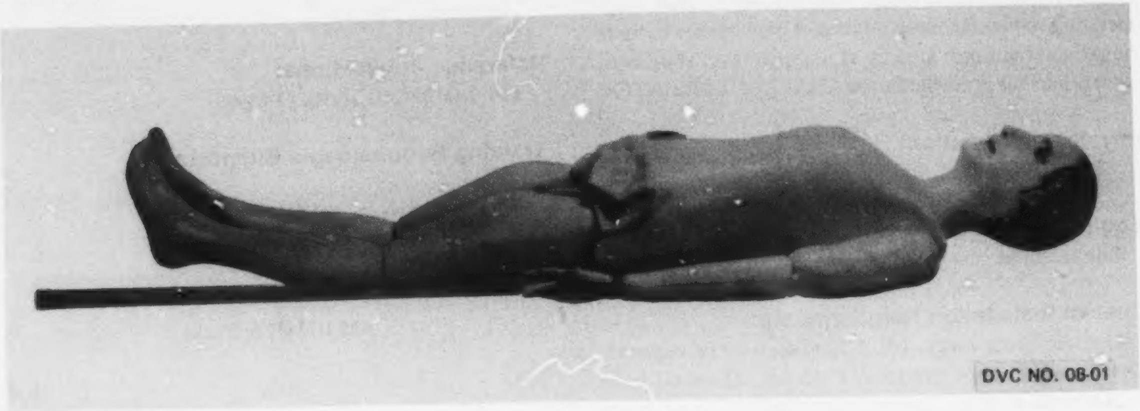
AM 071-11A Tasks

2004	2005	2304

DOLL, TRAINING, NURSING TECHNIQUE

DVC 08-01

NSN 6910-00-779-4600



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
DPSC

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:
The device is intended to be used by military medical personnel at all levels of medical training and evaluation of basic nursing care. It provides trainees realistic practice in nursing care techniques and is used in evaluation of techniques such as catheterization, bladder irrigation, colonic irrigation enemas, nasal and otic douching, and hypodermic injection. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The device is an adult size, plastic model with operable joints, genitals, urethral and rectal tubes, and internal tanks. It is particularly suited for the attachment of any of the various moulage kits that are designed to fit a human subject.

Physical Information:
Life size

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
None

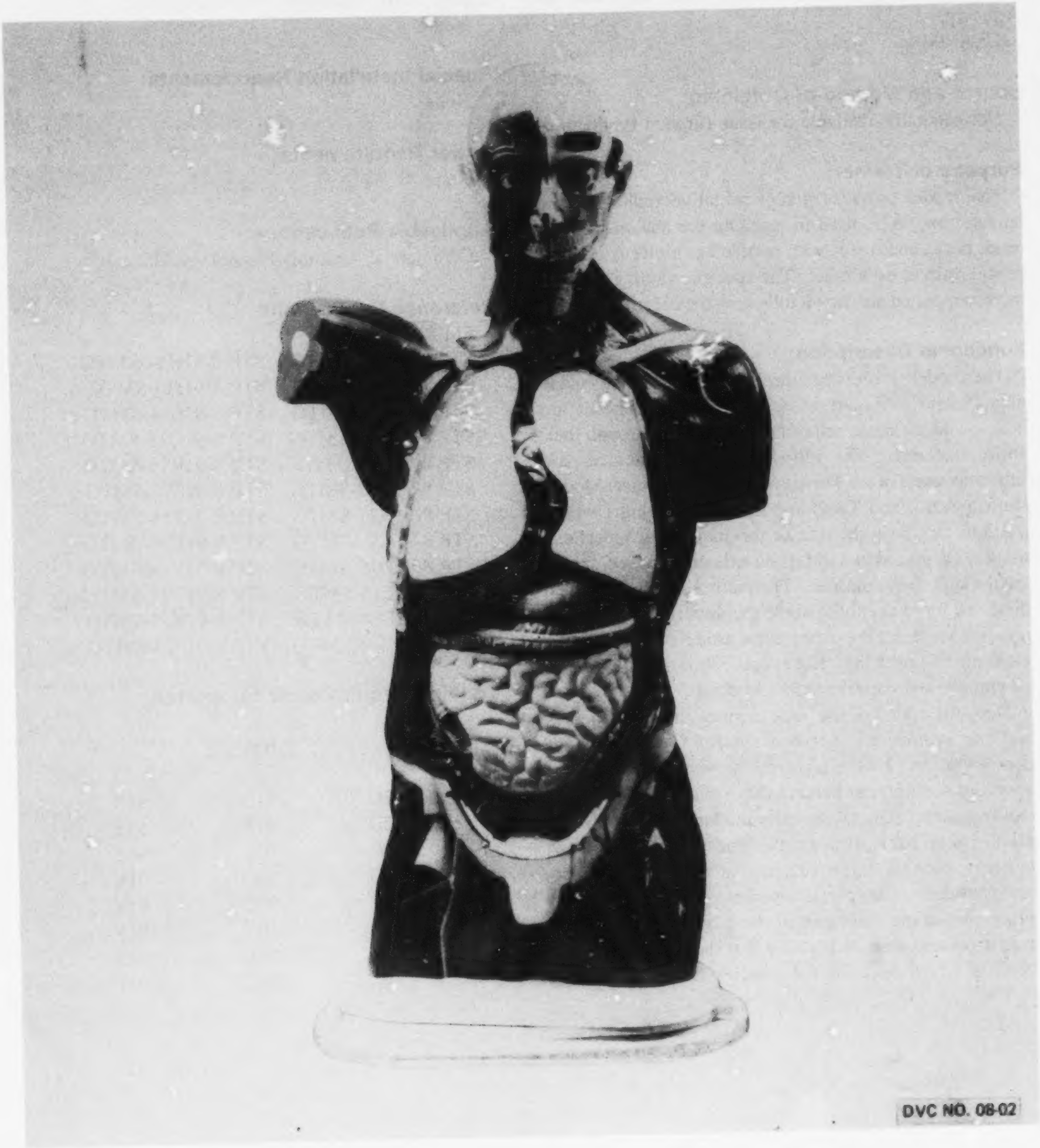
Reference Publications:
None

Training Requirements Supported:
All Soldier's Manual task for 91 CMF.

MODEL, ANATOMICAL: TORSO AND HEAD

DVC 08-02
29JD1

NSN: 6910-00-299-8626



DVC NO. 08-02

DVC 08-02

Training Category/Level Utilized:
Medical/Level 2

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Not generally available for issue (limited Production)

Purpose of Trainer:

The model provides a representative replica of the human torso to be used in teaching the anatomy of the head, neck, and torso, with particular emphasis on their relationship to each other. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The model is life-size, three-dimensional, and made of a thermo setting resin. All parts of the model are hollow and the basic color of resins extend through their entire thickness. The following training devices are subcomponents of the Torso and Head Anatomical Model: Human Skull, and Teeth and Gums, Brushing Demonstration. On the right side of the model the superficial tissues, such as skin and fat, have been removed exposing the superficial muscles. The buttocks region has been dissected more deeply to show the underlying groups of muscles which are important in the articulation and movement of the upper leg. The spinal column is exposed in its entirety and can be studied in detail.

Deep dissection of the back exposes the spinal nerves and the sympathetic nervous system for purposes of demonstration. To the right of the vertebral column a special dissection has been made to show how the chest cavity is completely taken up by the lungs, which extend all the way back through the chest cavity. Various systems, such as digestive, circulatory, and glandular, are provided with special attachments for removal or placement in the main part of the model. The musculature is presented in such a way that the student can perceive in which direction the muscles function.

Physical Information:
Life size, weighs 19 lbs. is 36'' x 16'' x 10''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
Commercial Anatomy/Physiology Manual

Reference Publications:
FM 8-230
STP-8-42C14-SMTG
STP 8-42D14-SMTG
STP 8-42E15-SMTG
STP 8-71G15-SMTG
STP 8-76J15-SMTG
STP 8-91A12-SMTG
STP 8-91B25-SMTG
STP 8-91C25-SMTG
STP 8-91D15-SMTG
STP 8-91E15-SMTG
STP 8-91F14-SMTG
STP 8-91G14-SMTG
STP 8-91H14-SMTG
STP 8-91J14-SMTG
STP 8-91L14-SMTG
STP 8-91Q15-SMTG
STP 8-91R15-SMTG
STP 8-91S15-SMTG
STP 8-91T14-SMTG
STP 8-91U14-SMTG
STP 8-91V14-SMTG
STP 8-91Y14-SMTG
STP 8-92B15-SMTG
STP 8-91P15-SMTG

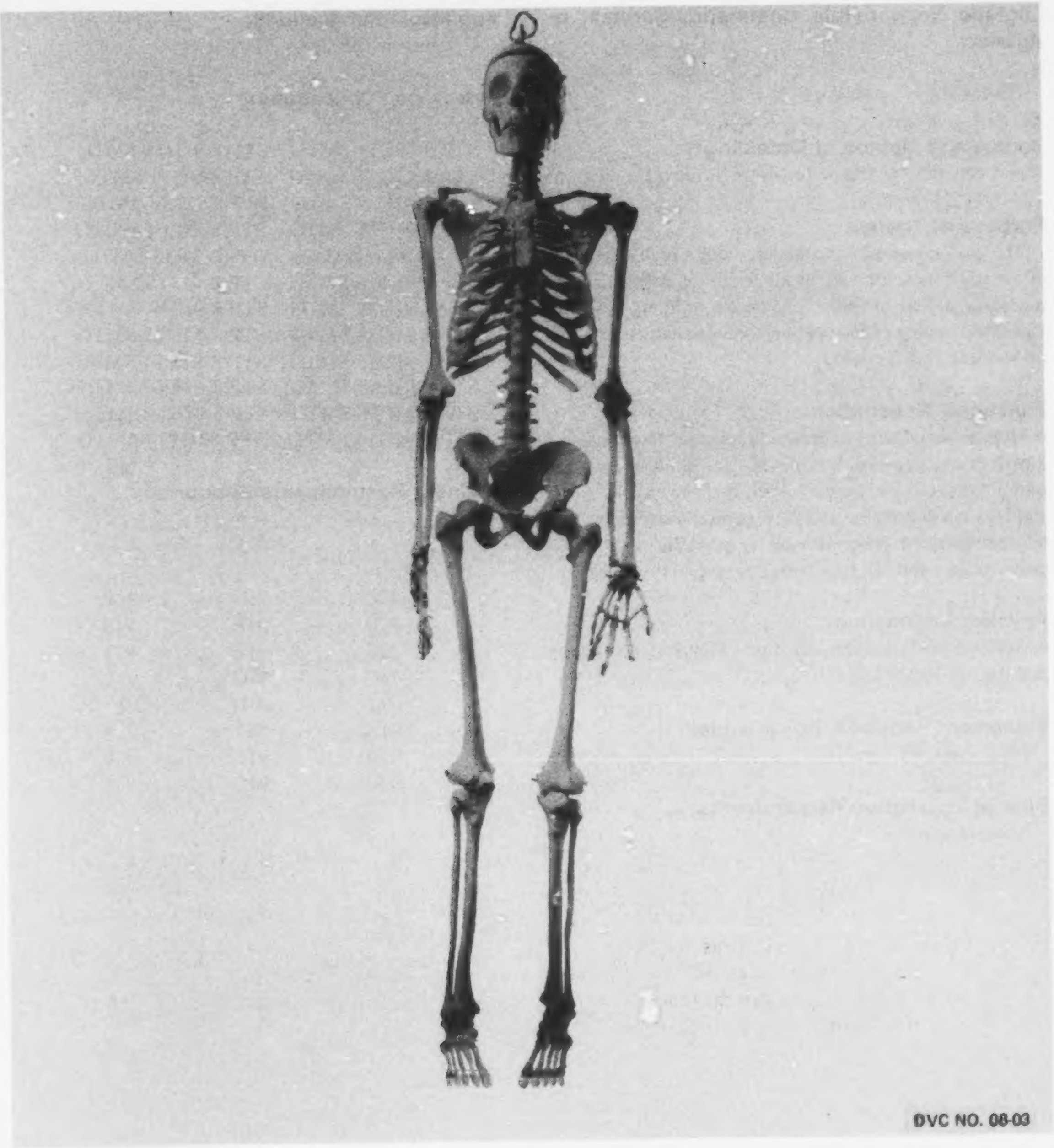
Training Requirements Supported:

MOS's

42C
42D
42E
71G
76J
91A
91B
91C
91D
91E
91F
91G
91H
91J
91L
91Q
91R
91S
91T
91U
91V
91Y
92B
91P

ADULT HUMAN MALE SKELETON

DVC 08-03 **NSN: Pending**



DVC NO. 08-03

DVC 08-03

Training Category/Level Utilized:

Medical/Level 2

Logistic Responsible Command, Service, or Agency:

USAMMA

Source and Method of Obtaining:

Not generally available for issue (limited Production)

Purpose of Trainer:

The device provides the student with a realistic model of an adult male for use at all levels of medical paramedical, or first aid/emergency care training. Used in Didactic Training of Medical Personnel usually in schools or Medical Unit Training.

Functional Description:

Human skeleton of unbreakable plastic. Exact cast of a perfect specimen adult skeleton. The skull is divisible into 3 parts: calotte, base of skull, and lower jaw. Arms and legs are detachable and their natural movements can be demonstrated. The skeleton is movable on a criss-cross roller stand. Comes with dust protection cover.

Physical Information:

Skeleton 61 has stand and dust cover Packed weighs 302 lbs. 76" x 24" x 15"

Equipment Required, Not Supplied:

None required

Special Installation Requirements:

None required

Power Requirements:

None required

Applicable Publications:

Commercial Anatomy Manual

Reference Publications:

FM 8-230
STP 8-42C14-SMTG
STP 8-42D14-SMTG
STP 8-42E15-SMTG
STP 8-71G15-SMTG
STP 8-76J15-SMTG
STP 8-91A12-SMTG
STP 8-91B25-SMTG
STP 8-91C25-SMTG
STP 8-91D15-SMTG
STP 8-91E15-SMTG
STP 8-91F14-SMTG
STP 8-91G14-SMTG
STP 8-91H14-SMTG
STP 8-91J14-SMTG
STP 8-91L14-SMTG
STP 8-91Q15-SMTG
STP 8-91R15-SMTG
STP 8-91S15-SMTG
STP 8-91T14-SMTG
STP 8-91U14-SMTG
STP 8-91V14-SMTG
STP 8-91Y14-SMTG
STP 8-92B15-SMTG
STP 8-91P15-SMTG

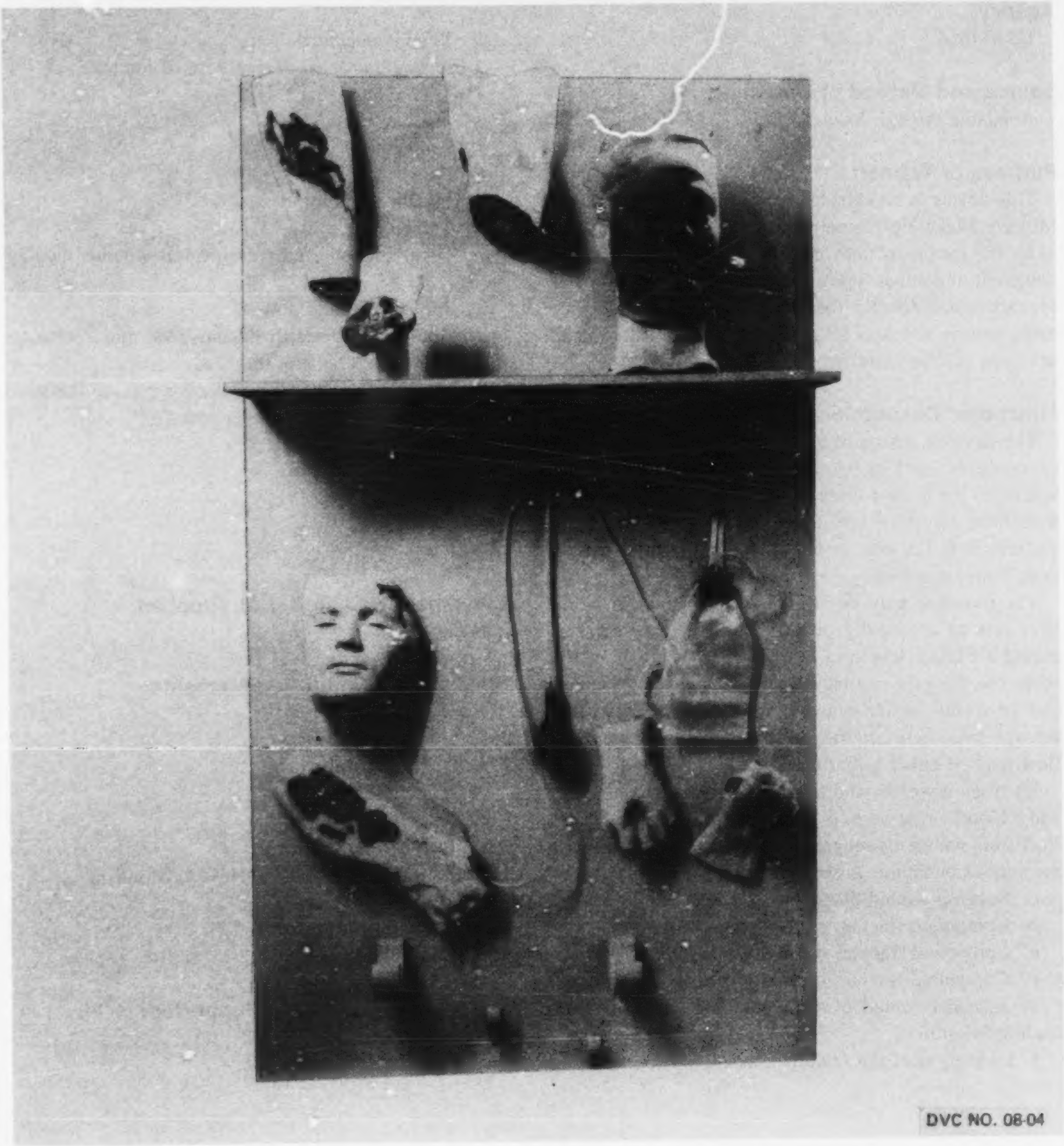
Training Requirements Supported:

MOS's

42C
42D
42E
71G
76J
91A
91B
91C
91D
91E
91F
91G
91H
91J
91L
91Q
91R
91S
91T
91U
91V
91Y
92B
91P

WAR-WOUND MOULAGE SET

DVC 08-04 **NSN: 6910-00-540-6378**



DVC NO. 08-04

DVC 08-04

Training Category/Level Utilized:

Medical/Level 3

Logistic Responsible Command, Service, or Agency:

USAMMA

Source and Method of Obtaining:

Available through local TASC's.

Purpose of Trainer:

This device is an enhancement of device "Advanced Military Make-Up Casualty Simulation Kit" and provides the means to train military personnel in first aid treatment of combat-type casualties and permits trainees to practice and develop first aid skills. Use of the device helps remove shock of first sight of a severe wound and develops skill in identifying and treating wounds.

Functional Description:

The device consists of a set of vinyl-plastisol models or moulages, each of which closely simulates an actual wound to the human body. Each moulage is life-sized, with bone structure and flesh shown in relief on the surface. It is finished in colors simulating real human skin, bone, and flesh.

The moulage may be strapped onto a human being who acts as a casualty or as a recipient of treatment during a FTX or lesson in first aid. During training, the subject wearing the moulage can manually operate a pump and reservoir which causes simulated blood to flow through veins and arteries built into the moulage. The flow may be either pulsating or steady.

Each set of war-wound moulages along with the pump and "blood" reservoir, is contained in a carrying case. Each item within the set can be ordered separately except the venous puncture. A set consists of:

a. Sucking wound of the chest.
b. Compound fracture of the femur.
c. Compound fracture of the lower leg.
d. Compound fracture of the humerus.
e. Shrapnel wound of the abdominal wall with protruding intestines.
f. Laceration of the scalp (forehead).
g. Shrapnel wound of the lower jaw including partial loss of jaw.
h. Gunshot wound of the palm (hand).
i. Phosphor (atomic) burn of the hand. palm, & dorsal area.
k. Venous puncture.
j. Second and third degree burn of forearm.
l. Atomic burn, back.
m. Atomic burn, chest.
n. Amputation.
o. Face in shock.
p. Frostbite of foot.
q. Trench foot.
r. Tube, suction, and pressure war wounds moulage set.
s. Simulated blood powder.
t. Moulage, upper arm skin, hypodermic insertion.
u. Phosphorus burn of the head.

Five 1-gallon packages of powder for making the simulated blood formula are also included.

Physical Information:

Life-size
29 lbs.
2.2 cu ft

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

AHS TTP 8-3 Pamphlet "How to Moulage"

Reference Publications:

FM 21-2

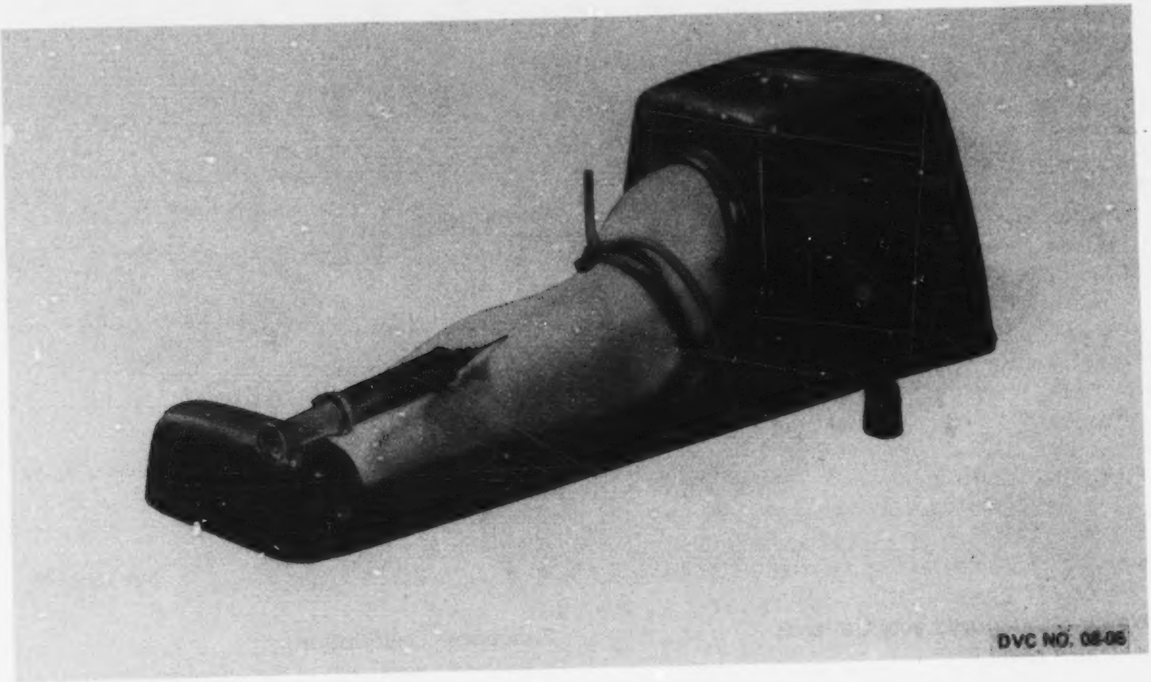
Training Requirements Supported:

All MOS's
Self-Aid/Buddy-Aid Tasks

INTRAVENOUS THERAPY TRAINER

DVC 08-05
11E1

NSN 6910-01-080-2884



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
DPSC

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:
To provide safe, realistic, and painless practice in performing intravenous injections in the human antecubital area.

Functional Description:
The trainer consists of a life-scale, operable plastic model of a human arm that is encased in a plastic stand in such a position that either of the two main veins located in the antecubital area are exposed for successful insertion of a hypodermic needle.

Physical Information:
Dimensions approximately 24'' x 6''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

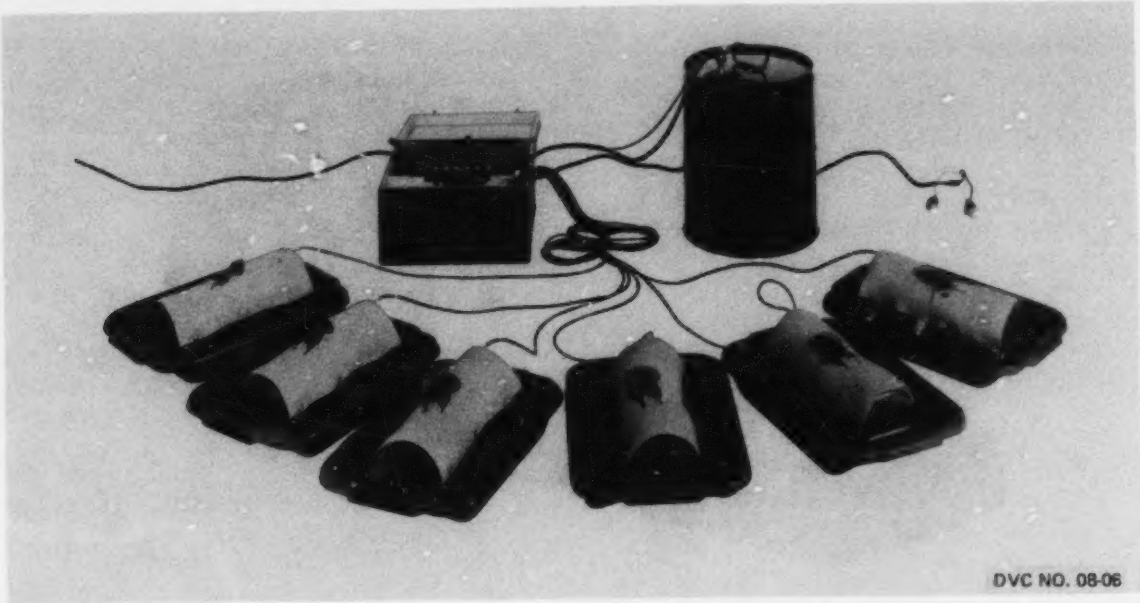
Applicable Publications:
None

Reference Publications:
None

Training Requirements Supported:
Soldier's Manual tasks for 91 CMF.

ARTERIAL-BLOOD ACTION SIMULATOR

DVC 08-06 **NSN: Pending**



DVC NO. 08-06

Training Category/Level Utilized:

Medical/Level 1

Logistic Responsible Command, Service, or Agency:

USAMMA

Source and Method of Obtaining:

Not generally available for issue (limited Production)

Purpose of Trainer:

The device provides trainees realistic practice in tying off blood vessels and applying first aid to the area of the antecubital fossa (forearm) by simulating the sight and action of arterial injury and bleeding. It is to be used at all medical training levels for basic or special training in identifying wounds of forearm and practice in tying off arteries. Used also for evaluation of performance. The specific training requirements are shown following the descriptive data. It should not be used in below-freezing temperature to avoid freezing of "blood" in reservoir.

Functional Description:

Principal components of the device are the six plastic moulages of a wounded forearm which is bleeding from the artery. Each of these moulages is life-size and realistically colored. They may be placed on foam rubber in trays, which are provided, or strapped onto dummies or human "subjects" during the first-aid training. The six moulages may be operated separately or simultaneously.

Simulated blood, mixed from a powder provided with the device, is stored in the 5-gallon reservoir provided. Manifold valves control the blood flow to the desired moulage(s) so that it flows into the moulage and out of the wound, as it would on a wounded person.

Control of the simulated blood is accomplished by means of a pump and power-supply unit, six blood-supply lines, a bypass return line, and a main blood-supply line.

Physical Information:

Double boxed for shipment, 8.5 cu ft

DVC 08-06

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
Operator Instructional Manual

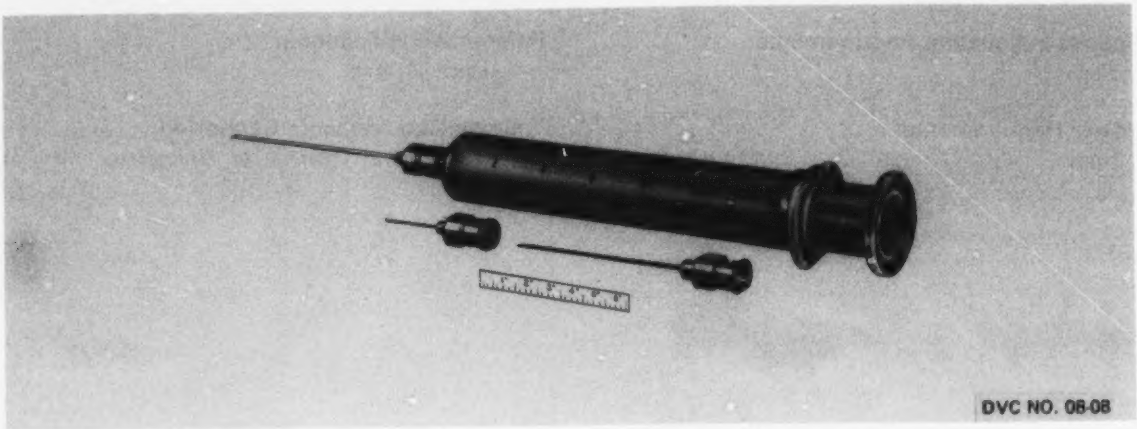
Reference Publications:
Commercial Texts

Training Requirements Supported:
Used to train Officers in Emergency Medical Procedures

HYPODERMIC SYRINGE TRAINER

DVC 08-08
11E4

NSN 6910-01-080-2883



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
DPSC

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:

The trainer demonstrates the characteristics and operation of the standard 10-cc hypodermic syringe, including demonstration of its assembly and of the operation of its component parts. It is used at all levels of military medical training for basic training in the nomenclature, operation, assembly, and disassembly. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a large-scale, operable, plastic and metal model of the standard 10-cc hypodermic syringe, with three interchangeable, graduated size, numbered needles. The cylinder is marked with a 10-cc scale.

The model is provided with a wooden container.

Physical Information:
Syringe: Approximately 24'' long; 4 lb
Container: 55-lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
None

Reference Publications:
None

Training Requirements Supported:
Soldier's Manual tasks for 91 CMF.

ORAL THERMOMETER TRAINER

DVC 08-09
11E5

NSN 6910-01-080-2882

Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
DPSC

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:
For general medical training demonstrating techniques of handling and reading the oral clinical thermometer. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The device is a large-scale, transparent, plastic model of the oral clinical thermometer, complete with mercury bulb, temperature graduations and numerals, and a simulated mercury column. A movable belt simulates the mercury column. Contrasting gray and white coloring provides contrast for viewing the belt.

The thermometer is provided in a storage case.

Physical Information:
30" x 4" x 4"; 12 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
None

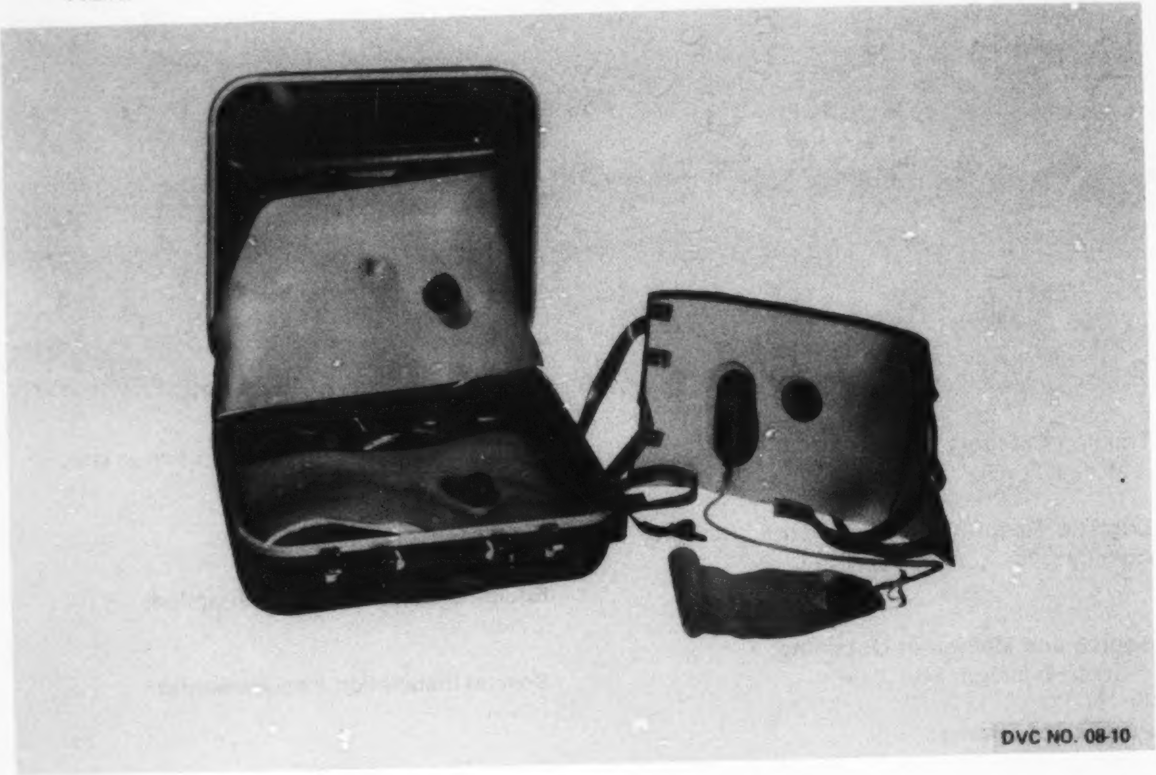
Reference Publications:
None

Training Requirements Supported:
Soldier's Manual tasks for 91 CMF.

COLOSTOMY MOULAGE KIT

DVC 08-10
11E16

NSN: Pending


DVC NO. 08-10

Training Category/Level Utilized:
Medical/Level 2

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Not generally available for issue (Limited Production)

Purpose of Trainer:
The device is to provide demonstrations or practice in colostomy irrigation. It is intended for courses of instruction in nursing techniques. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The kit consists of full-scale moulages of the abdomen, constructed to fit either a human subject or DVC 8-1, Adult Doll Nursing Technique Trainer. The kit contains one ''single-barreled'' uncomplicated colostomy moulage, one ''single barreled'' colostomy moulage with necrotic skin edges, and one ''doubled-barreled'' colostomy moulage. The kit is contained in a plastic carrying case. Each moulage is complete with base, flexible tubing, and reservoir. A sheet of sponge rubber separates the plastic skin from the base.

Physical Information:
Kit with carrying case 28'' x 18'' x 8''

Equipment Required, Not Supplied:
Human subject, or DVC 8-1, Adult Doll Nursing Technique Trainer

Special Installation Requirements:
None

DVC 08-10

Power Requirements:
None

Applicable Publications:
None

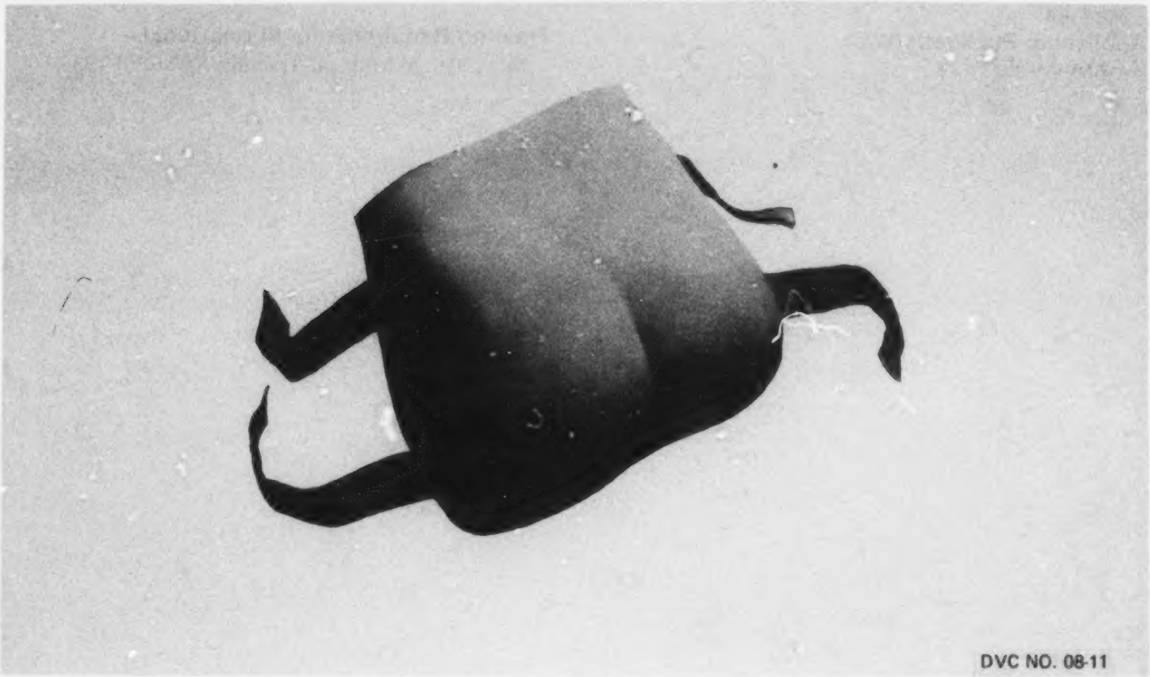
Reference Publications:
FM 8-273 and FM 8-273-20

Training Requirements Supported:
MOS 91C in Resident Training ARTEP 8-123

BUTTOCKS MOULAGE KIT

DVC 08-11
11E7

NSN None



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
DPSC

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:
The device permits medical personnel trainees to practice in the interamuscular administration of drugs. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The moulage consists of a layer of plastic skin, a sheet of sponge rubber, a rigid plastic base (to prevent a hypodermic needle from penetrating to the wearer), and attaching straps.

Caution: Use only clear water, containing no drugs or solutions, as the injection fluid straps.

The moulage can be attached by the straps provided to DVC 8-1, Adult Doll Nursing Technique Trainer, or to a human subject.

To provide for more realism, the edges of the moulage can be concealed with sheets of clothing.

Physical Information:
Life-size

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

DVC 08-11

Applicable Publications:
NAVEXOS P-1946, Instruction sheet for the Care and Use of Buttocks Moulage, Device 11E7

Reference Publications:
None

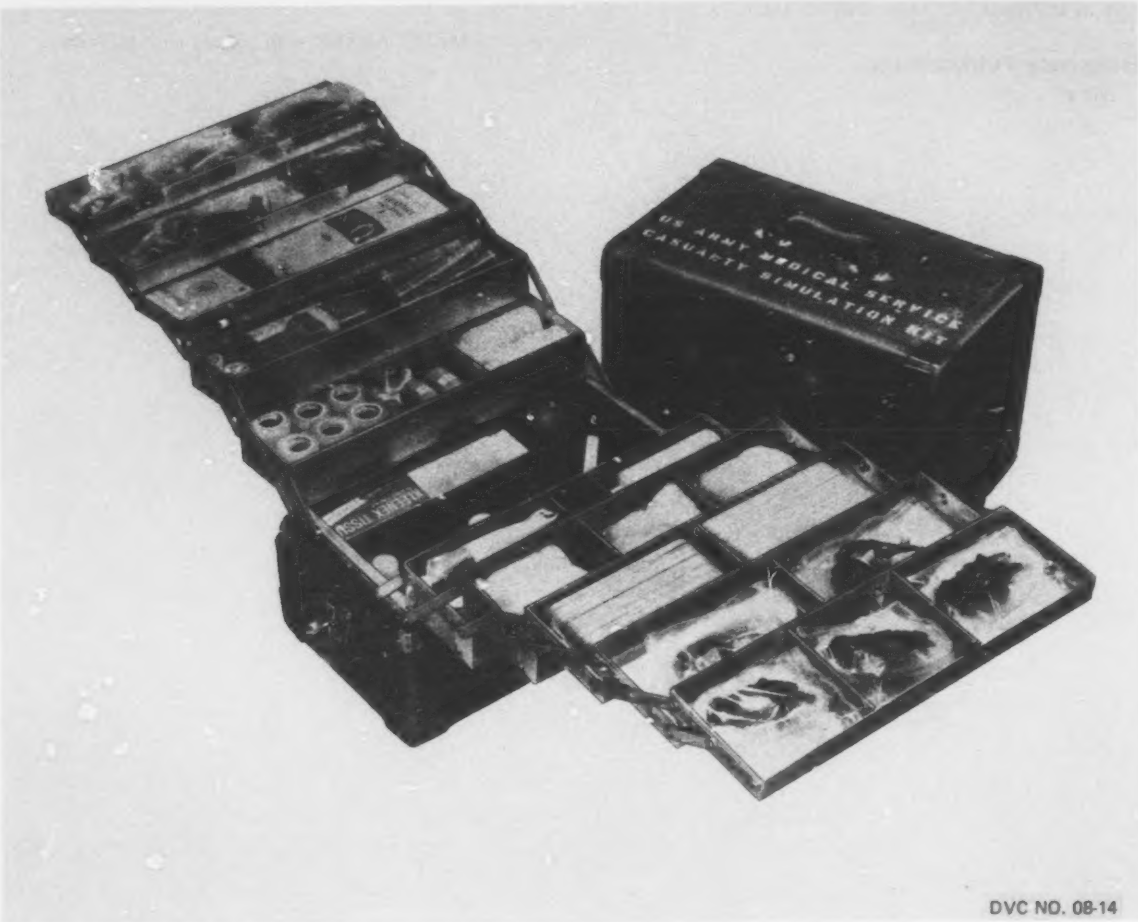
Training Requirements Supported:
MOSC 91B, 91C, and 91D and other resident training.

AMEDD ARTEP with patient care mission.

CASUALTY SIMULATION KIT

DVC 08-14
11E10

NSN None



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:

The device provides materials for realistically simulating many types of wounds incurred in battle or disaster. The materials are used in training military and civilian groups in first aid to casualties and to condition these groups not to be shocked at the appearance of the casualties. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The Casualty Simulation Kit consists of 100 stick-on wound moulages and a variety of makeup material to be applied, in accordance with the accompanying instructions, to selected persons who act as casualties during simulation of a battle or disaster.

The realistically-colored plastic moulages include simulations of 30 small flesh wounds; 15 perforated wounds; 25 large and small fractures; 15 first-, second-, and third-degree burns; 3 open head wounds; 3 enucleated eyes, 3 chest wounds; 3 jaw wounds; and 3 bladder wounds.

DVC 08-14

After application of the selected wound moulages, makeup is applied to represent different types of blood (depending on the type of severity of the wound), frothing of the mouth, loss of stomach content, shock, perspiration, bruises, contusions, and other effects.

The Instructors Guide for the Casualty Simulation Kit provides many full-color illustrations which amplify the text and greatly assist the person applying the moulages and makeup. This Guide lists all makeup and other materials required, along with commercial source or national stock number.

Physical Information:
Kit: 15'' x 9'' x 14''; 25 lb

Equipment Required, Not Supplied:
As listed in Applicable Publications.

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
NAVEXOS P-2709, Instructors Guide for Casualty Simulation Kit, Device 11E10

Reference Publications:
FM 8-23

Training Requirements Supported:

AMEDD ARTEP with patient care mission.

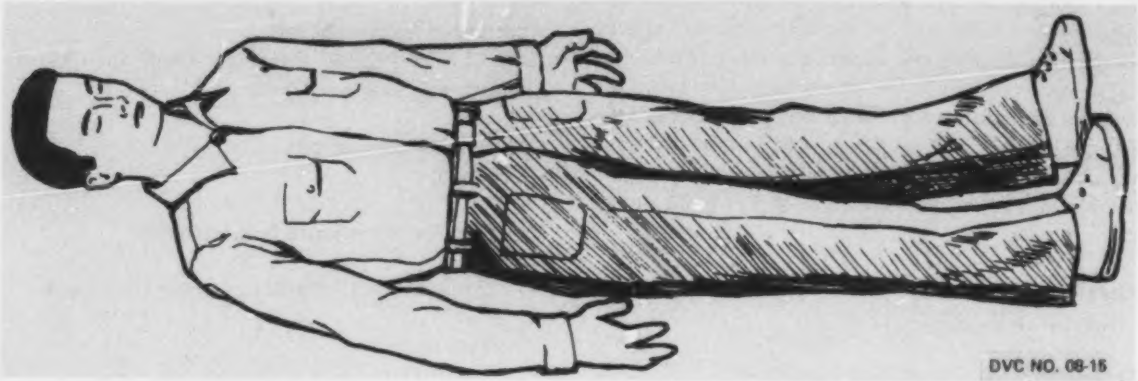
MOSC 91 CMF

SM 081-XXX Tasks

1002
1467
1478
2101
2102

MANIKIN, RESUSCITATION TRAINING

DVC 08-15 **NSN: 6910-00-516-5436**



DVC NO. 08-15

Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TASC's

Purpose of Trainer:
The device provides realistic practice in mouth-to-mouth and/or cardiopulmonary resuscitation, bleeding control, and the application of leg splints or traction. This training device supports training in first aid and medical Soldier's Manual tasks in all MOS. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The device is an adult male, noninflatable body with heart-lung resuscitation, visual indicating device, air vent, broken femur, dilated pupil, and penetrating arm wound simulation. This torso is separable at the waist and has a removable head. This training device also comes with plastic face mask pieces, outer garments, and two carrying bags. This manikin will simulate breastbone reaction and carotid pulse pressure of an unconscious person.

Physical Information:
Life size, non-inflatable body with removable head.

Equipment Required Not Supplied: Letter "Recommendations for Decontaminating Manikins Used in CPR Training, 1983 Update." BDUS/Fatigues.

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
Commercial Manual

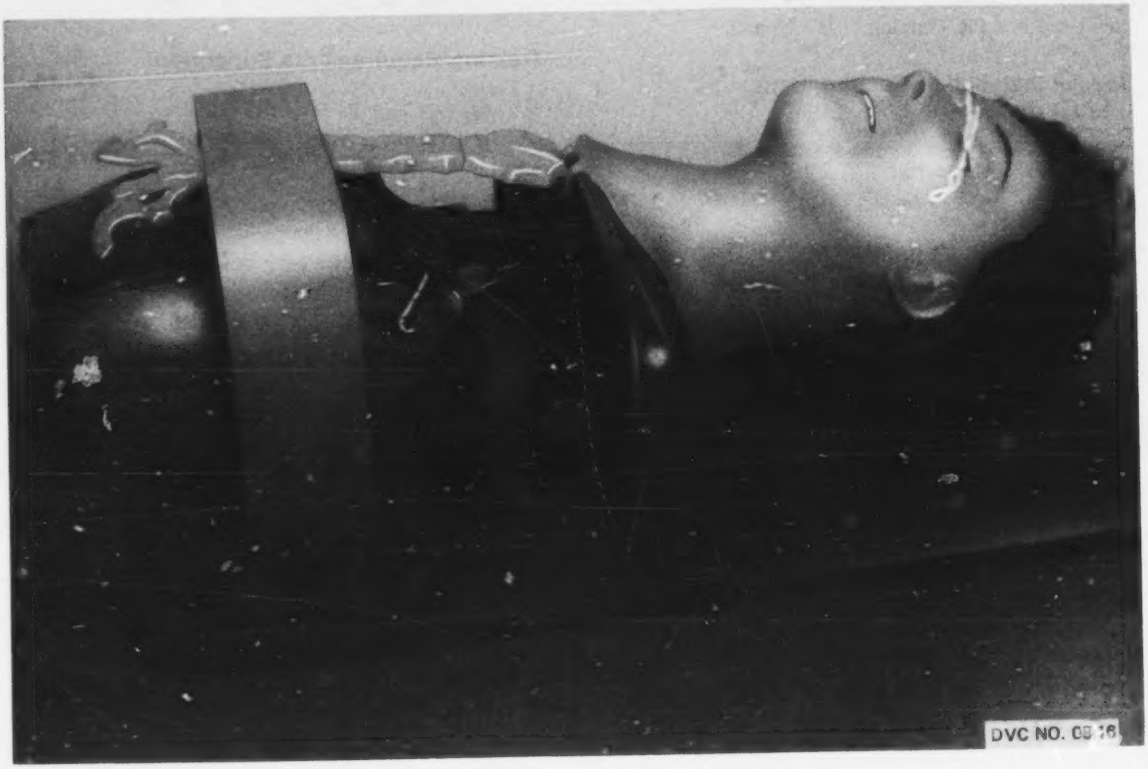
Reference Publications:
FM 8-230
FM 21-2
STP 8-42C14-SMTG
STP 8-42D14-SMTG
STP 8-42E15-SMTG
STP 8-71G15-SMTG
STP 8-76J15-SMTG
STP 8-91A12-SMTG
STP 8-91B25-SMTG
STP 8-91C25-SMTG
STP 8-91D15-SMTG
STP 8-91E15-SMTG
STP 8-91F14-SMTG
STP 8-91G14-SMTG
STP 8-91H14-SMTG
STP 8-91J14-SMTG
STP 8-91L14-SMTG
STP 8-91Q15-SMTG
STP 8-91R15-SMTG
STP 8-91S15-SMTG
STP 8-91T14-SMTG
STP 8-91U14-SMTG
STP 8-91V14-SMTG
STP 8-91Y14-SMTG
STP 8-92B15-SMTG
STP 8-91P15-SMTG

Training Requirements Supported:
Tasks:
- 081-831-1000
- 081-831-0047

All 8 Series ARTEPS
- Buddy-Aid Life Saving Skills

MANIKIN RESUSCITATION TORSO

DVC 08-16 **NSN: 6910-01-080-2885**



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TASC's

Purpose of Trainer:

To provide a realistic human blood circulation system to be used to demonstrate and train both artificial ventilation and external cardiac compressions. The device is portable and can be used for indoor as well as out-of-doors demonstrations. It can be used in medical classes, also for basic first aid instructions. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The device is an adult model, natural size Torso Manikin, The head section is made of rubber base material while the blood circulation system is made of a plastic composition. When the device is used in the artificial ventilation (mouth-to-mouth resuscitation) mode, the practicing intermittent positive pressure inflates and deflates the lungs. When used in the external cardiac compression mode, the device shows the heart being compressed between the sternum and the spine and the exchange of blood in its circulation tubes. After basic instructions, the device is self-taught. Accessories furnished in a sterilization kit are: stand for head, tubing with nipple, syringe, sterilizing solution, measuring glass, and funnel.

Physical Information: Weight 35 lb
Device: 24'' x 15'' x 8''
Carrying Case: 26'' x 17'' x 10''

DVC 08-16

Equipment Required, Not Supplied:
Letter "Recommendations for Decontaminating Manikins Used in CPR Training, 1983 Update."

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
Commercial Manual

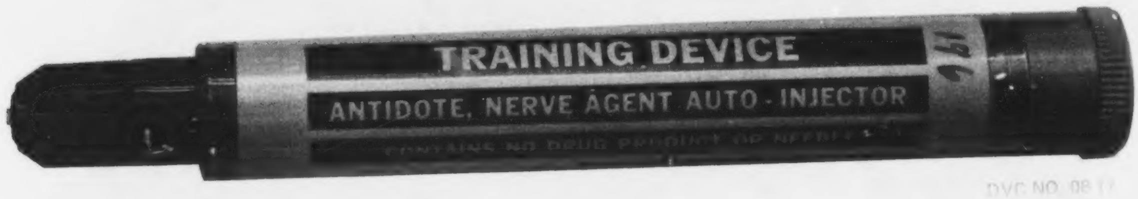
Reference Publications:
FM 8-230, FM 21-11, STP 21-1-SMCT

Training Requirements Supported:
Tasks:
081-831-0048
081-831-0046
081-831-1042
MOS's All Skill Level 1
Buddy-Aid Life Saving
All 8 Series ARTEPS and other units with medical personnel.

HYPODERMIC AUTO-INJECTOR, DEMONSTRATION

DVC 08-17

NSN 6910-01-061-6444



Training Category/Level Utilized:
General/Level 3

Logistic Responsible Command, Service, or Agency:
DPSC

Source and Method of Obtaining:
AVailable for issue IAW CTA 8-100.

Purpose of Trainer:

This nerve agent antidote auto-injector device is for training individuals in the proper use of Antidote, Nerve Agents, Injector (NSN 6505-00-134-2943). This device simulates the situation of a trainer in practicing the administration of an injection by the proper method without using a real injector. The training requirements supported are shown following the descriptive data.

Functional Description:

This training device has the same basic appearance as the injector except for color coding and description of contents. This training device functions in the same manner as the actual injector except that the device does not contain drug products or needle. The device activates when a force of 1½ to 9 pounds (0.7 to 4 kg) is applied.

Physical Information:

Item is basically the same as the injector being simulated. This device incorporates a dull plastic prod and a removable safety cap. Unit is packaged in a plastic bag.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirement:
None

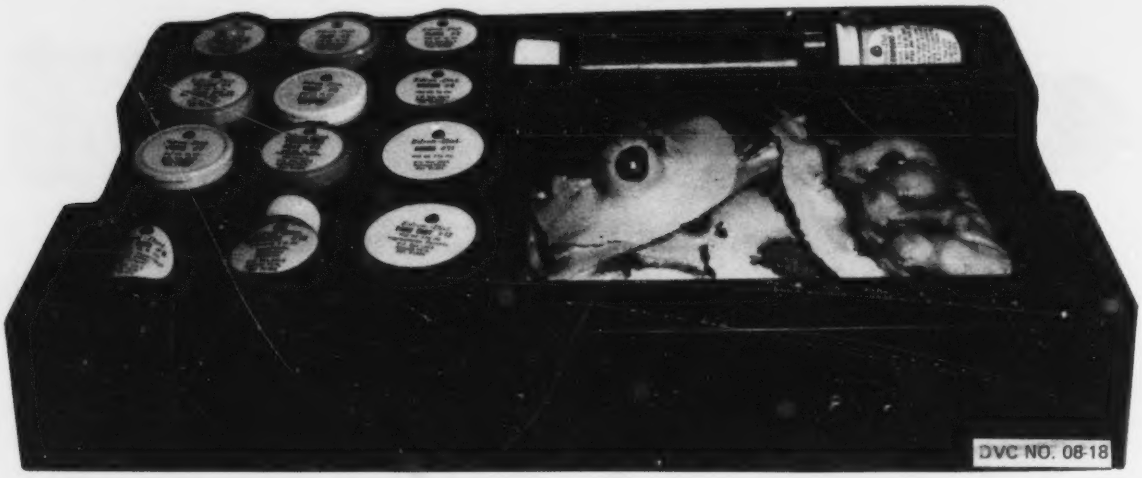
Applicable Publications:
None

Reference Publications:
None

Training Requirements Supported:
MOSC All, skill level 1

EDRON SIMULATED INJURY KIT

DVC 08-18 **NSN 6910-01-049-6401**



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
DPSC

Source and Method of Obtaining:
Available through local TASC's.

Purpose of Trainer:
This kit is designed to train both military and civilian groups in first aid to casualties and the recognition of medical problems and application of learned skills. This kit is also important in conditioning groups of trainees not to be shocked at the appearance of the casualties. The specific training requirements supported are shown following the descriptive data.

Functional Description:
This kit contains 15 assorted, easily applied life-like form simulated wounds plus makeup materials which can create additional simulated injuries. After application of the selected wound moulages, makeup is applied to represent different types of blood, shock, bruises, and contusions. These applications simulate battle or disaster wounds.

Physical Information:
10'' x 17'' x 3'', corrugated tuck-top mailer with vacuum-formed insert tray; weight: 3 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

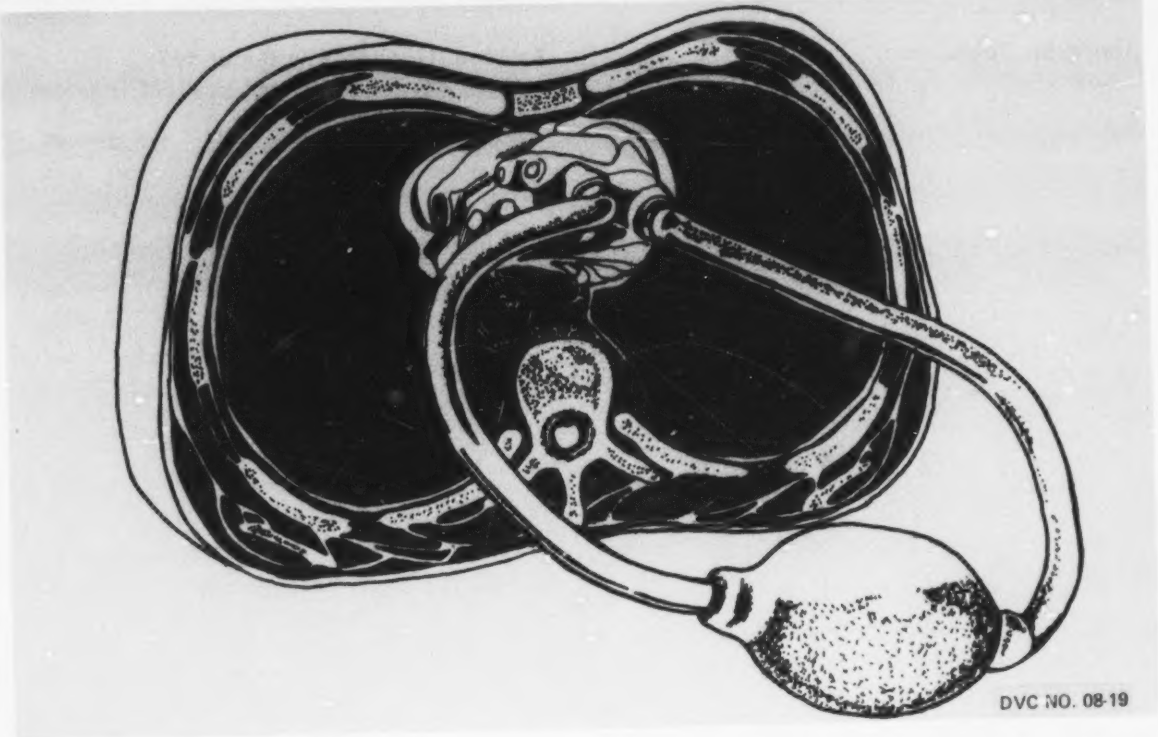
Applicable Publications:
None

Reference Publications:
FM 8-23

Training Requirements Supported:
MOSC All first aid and medical tasks

MANIKIN, THORACIC CROSS-SECTION

DVC 08-19 **NSN 6910-00-782-5579**



Training Category/Level Utilized:

Medical/Level 3

Logistic Responsible Command Service, or Agency:

DPSC

Source and Method of Obtaining:

Available through local TASCs.

Purpose of Trainer:

To teach the positions and interactions of the thoratic anatomical structures during artificial ventilation and external cardiac massage. This device is intended for use as a demonstrator only. It is not suitable as a practical exercise training device.

Functional Description:

The Thorax Cut-a-Away is a cross section through the lower half of the sternum. The lower half of the thoracic cage consists of lung area, removable heart with simulated blood, rib cage, sternum, and vertebral column. This training aid closely resembles the conditions found in an adult. The heart lying beneath the sternum is separated from the spine by the oesophagus and great vessels. Only where the correct pressure is exerted and the sternum depressed from 1½ to 2 inches is blood ejected from the heart. When the pressure is relaxed, the venuous blood returns to the heart.

Physical Information:

Manikin, plastic, life-size with carrying case; weight: 7 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

DVC 08-19

Power Requirements:
None

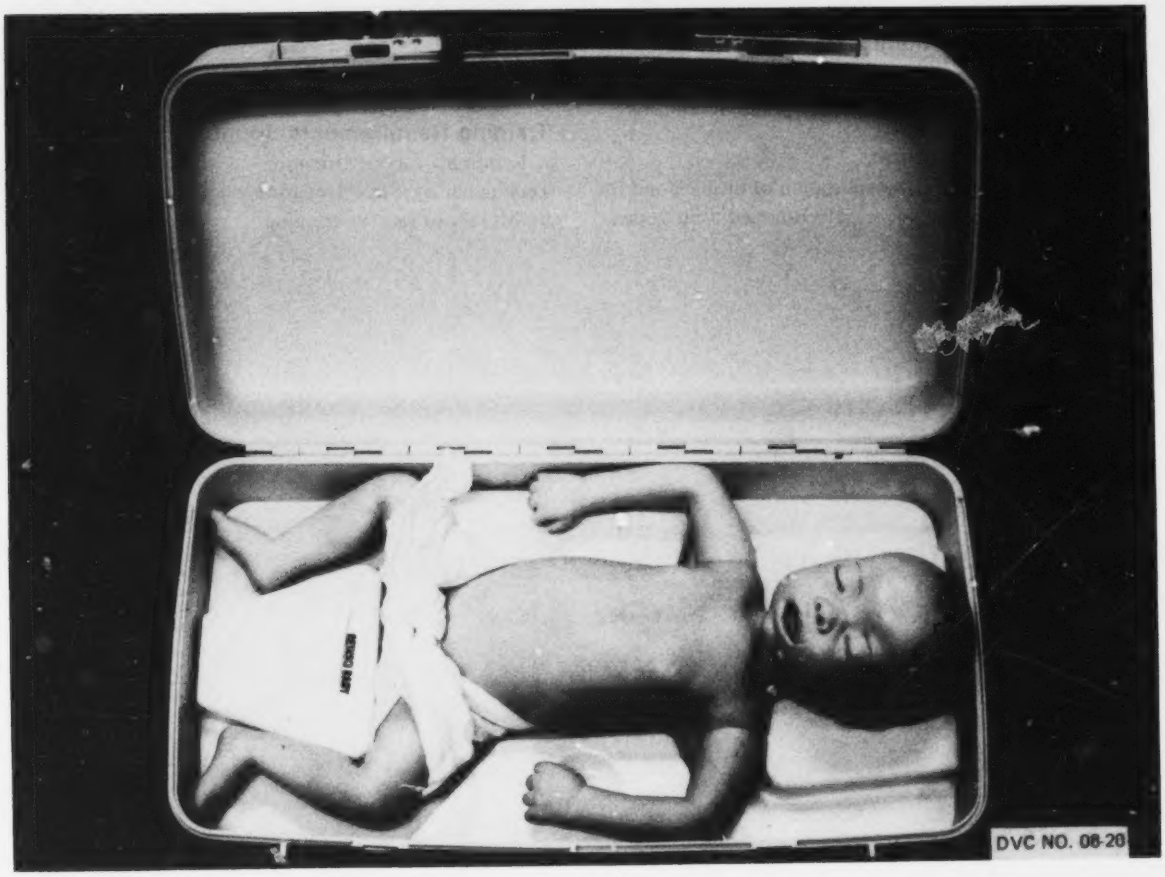
Applicable Publication:
None

Reference Publications:
None

Training Requirements Supported:
MOSC All, skill levels 1 and 2; and SM Tasks involving cardiac compression.

MANIKIN, RESUSCITATION TRAINING INFANT

DVC 08-20 NSN: 6910-00-149-1478



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
Available through local TASC's.

Source and Method of Obtaining:
Not generally available for issue (Limited Production)

Purpose of Trainer:
The device provides realistic practice in mouth-to-mouth and/or cardiopulmonary resuscitation on infants. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The device is an infant, plastic, non-inflatable body with movable head, arms, and legs. The infant manikin also shows gastric extension should excessive pressure be used for inflation.

Physical Information:
Infant size, 22'' x 11'' x 6'', noninflatable body with carrying case; weight: 11 lb.

Equipment Required, Not Supplied:
Letter ''Recommendations for Decontaminating Manikins Used in CPR Training, 1983 Update.''

Special Installation Requirements:
None

DVC 08-21

Power Requirements:
None

Applicable Publications:
None

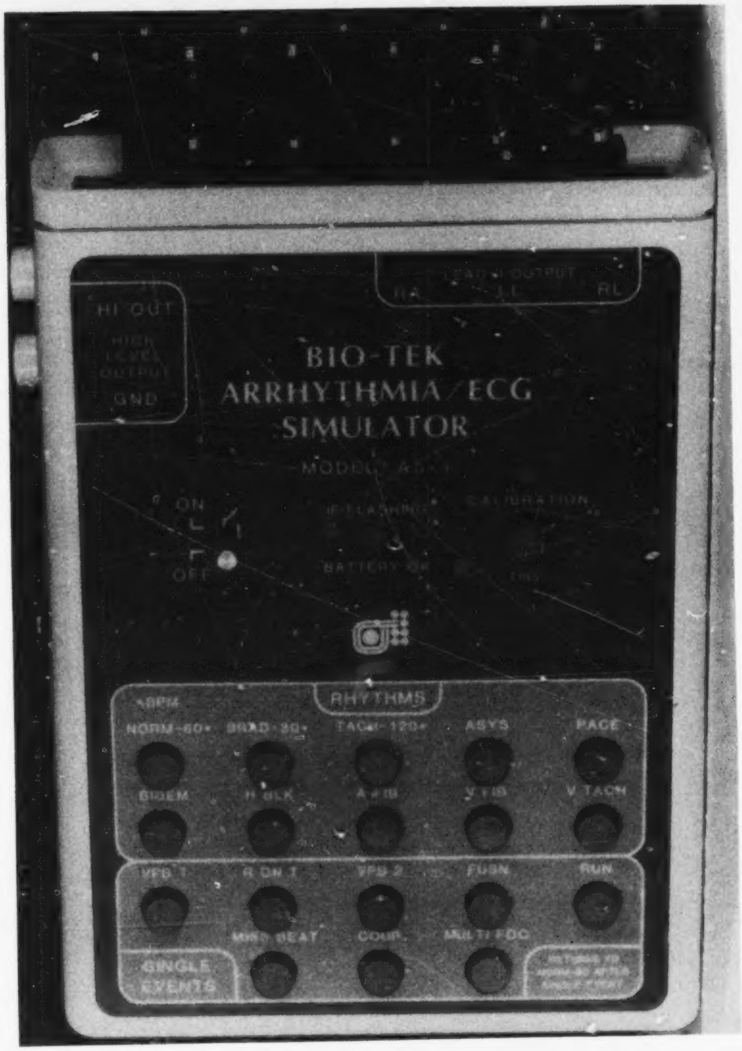
Reference Publications:
1. Emergency care and transportation of the sick and injured, American Academy of Orthopedic Surgeons.
2. Red Cross CPR Module Respiratory and Circulation Emergencies.
3. American Heart Association Manual for Instructors for Cardiac Life Manual. Student Manual for Basic Life Support Cardio Pulmonary Resuscitation.

Training Requirements Supported:
Required for certification as Emergency Medical Technician by State Department of Health. Must have 91 MOS's to receive training.

ARRHYTHMIA SIMULATOR

DVC 08-21

NSN: 6910-01-186-8436


BIO-TEK
ARRHYTHMIA/ECG
SIMULATOR
HI OUT
GND
ON
OFF
RHYTHMS
NORM-60
BRAD-30
TACH-120
ASYS
PACE
BIGEM
V TACH
FUSN
RUN
MISD BEAT
COUP.
MULTI FOC
SINGLE EVENTS

Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TASC's

Purpose of Trainer:
The device will be used to train field medical care personnel in the recognition of life-threatening cardiac arrhythmias through the use of the Defibrillator/Electrocardiograph/Monitor Recorder NSN: 6515-01-173-2053.

DVC 08-21

Functional Description:

The simulator is battery powered and completely portable. The device is capable of simulating a normal cardiac rhythm plus 17 irregular rhythms and has a 12-lead connection.

Physical Information:

Weight 12 ounces is 1½" x 5½" x 7½" and has 3 universal ECG jacks (for arrythmias) 10 banana jacks (for ECG testing) Equipment Required, Not Supplied:

9 volt battery
Defibrillator/ECG/Monitor
Recorder, NSN: 6515-01-173-2053

Special Installation Requirements:

None

Power Requirements:

9 volt for the device, 110-220 for defibrillator

Applicable Publications:

None

Reference Publications:

Operator Manual and Photo of Abnormal Tracings

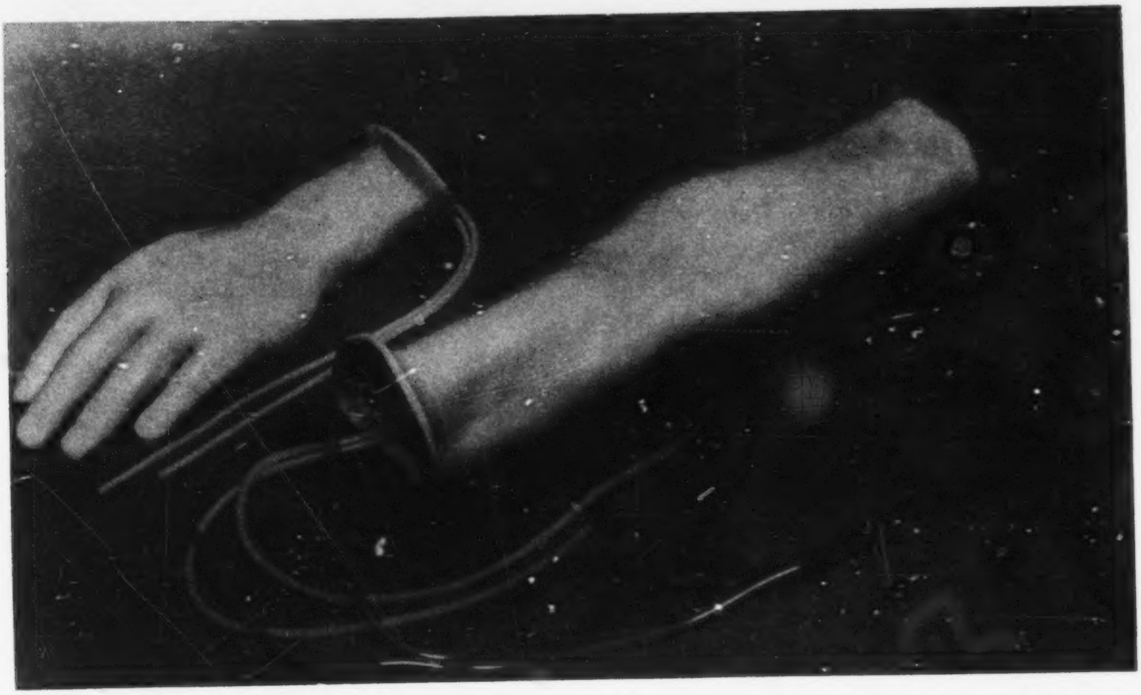
STP 8-91B25-SMTG
Task: 081-833-3009
MOS 91B (This task is normally taught at the Academy and Medical Unit Level)

Training Requirements Supported:

AMEDD ARTEP tasks with patient care mission.

IV TRAINING ARM AND IV TRAINING HAND

DVC 08-23 **NSN: Pending**



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TASC's

Purpose of Trainer:
Designed for practice in giving IV's. Permits detailed exercises in veni-puncture so that the technique can be mastered on a realistic model before actually administrating to patients.

Functional Description:
The student can palpate the arm and hand, which are made of supple resilient plastic with a human feel. Two plastic reservoirs couple to the venous system to complete the circulatory system. The vein is located, the needle introduced. The models can be used repeatedly and new skin and new veins may be installed when necessary. Powder to make simulated blood and carrying tray are included for each model. Replacement covers are available.

Physical Information:
IV Hand: 3 lbs, 18'' x 6'' x 5''
IV Arm: 4 lbs, 9'' x 6'' x 4''

Equipment Required, Not Supplied:
Tourniquet, Hypodermic Syringe,
Liquids as Required.

Special Installation Requirements:
None required

Power Requirements:
None required

Applicable Publications:
None

DVC 08-23

Reference Publications:

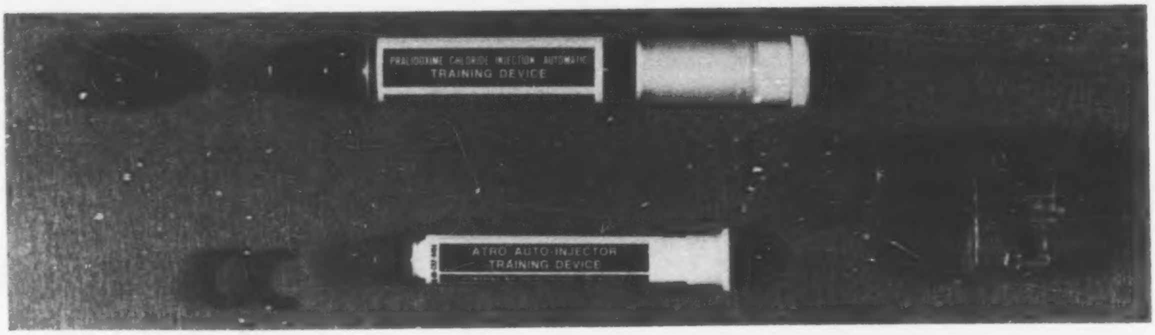
- FM 8-230
- STP 8-91A12-SMTG
- STP 8-91B25-SMTG
- STP 8-91C25-SMTG
- STP 8-91F14-SMTG
- STP 8-91V14-SMTG
- STP 8-92B15-SMTG

Training Requirements Supported:

- Tasks:
  - 081-833-0032
  - 081-833-0033
  - 081-833-3000
- MOS's:
  - 91A, 91B, 91C,
  - 91F, 91V, 92B

TRAINING KIT, NERVE AGENT ANTIDOTE, MARK I, TYPE I

DVC 08-36 **NSN: 6910-00-C92-0462**



Training Category/Level Utilized:

General/Level 3

Logistic Responsible Command, Service, or Agency:

USAMMA

Source and Method of Obtaining:

Available through local TASC's.

Purpose of Trainer:

This nerve agent antidote autoinjector training kit is for training individuals in the proper administration of Antidote for Chemical Nerve Agent poisoning without using real injectors.

Functional Description:

The training device has the same basic appearance as the real autoinjector except for color coding and description of contents. The training device functions in the same manner as the actual injectors except that the device does not contain drug products or needle. Color coding is light blue with white on black labels. The device functions with an audible click and ejects a 0.25 inch plastic flat prod (needle) when activated with an applied pressure of 1.5 to 9 pounds.

Physical Information:

Each auto-injector incorporates a removable safety cap. The assembled kit comes packaged in a black styrofoam case. Recocking devices.

Equipment Required, Not Supplied:

Replacement items can be ordered through normal channels: 1) Training Device, 2 PAM Chloride Injection, NSN 6910-00-C92-0463. 2) Training Device, Atropine Injection, NSN 6910-00-C92-0464. 3) Clip, MARK I, NSN 6630-00-C95-2115. 4) Pouch, MARK I, NSN 6530-00-C95-2116.

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

None

Reference Publications:

FM 21-2-SMCT
STP 21-1-SMCT

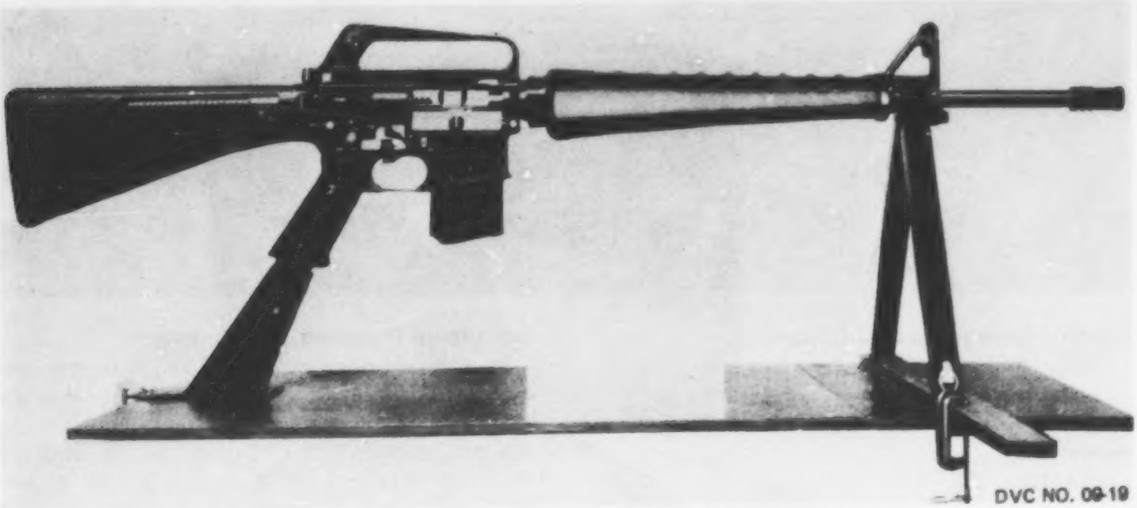
Training Requirements Supported:

Task 081-831-1030
MOSC All, Skill Level 1

RIFLE, TRAINING AID, 5.56MM, M16A1

DVC 09-19
3F68

NSN 6920-01-067-1681



DVC NO. 09-19

Training Category/Level Utilized:
Ordnance/Level 3

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:
For classroom use to aid instruction in the operation, assembly, and disassembly of the Rifle, M16A1, 5.56mm, and to assist in the teaching of parts recognition and nomenclature. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is a 2:1 scale mockup of the M16A1 Rifle with all parts operable but nonfiring. The device can be manually operated through the complete cycles of semiautomatic and automatic rates of fire. It can be field-stripped and reassembled using the same procedures used with the actual rifle.

Physical Information:
58'' x 48'' x 20''; 30 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
NAVTRADEV P-3553, Guide for 2:1 Scale Mockup of M16A1 Rifle, Device 3F68

Reference Publications:
FM 23-9

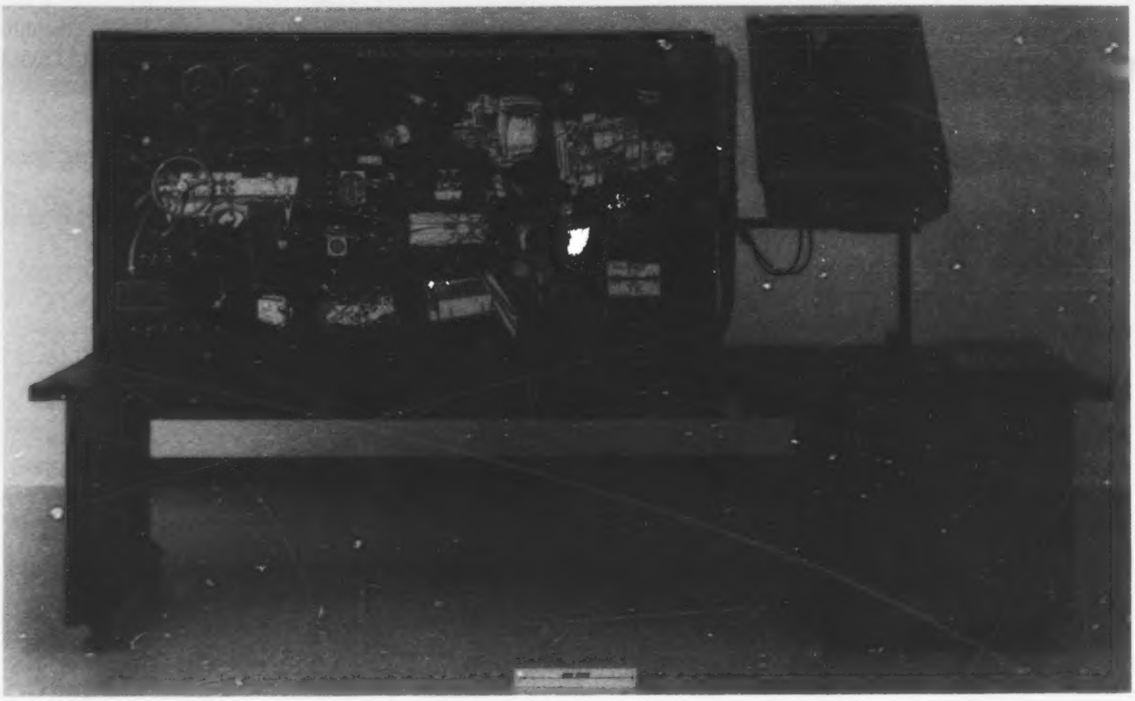
Training Requirement Supported:

SM 091-63A

1120

M35A2C TROUBLESHOOTING USING STE/ICE TRAINER

DVC 09-23 **NSN None**



Training Category/Level Utilized:

Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to provide maintenance training and familiarization for selected systems of an M35A2C vehicle. The trainer provides organizational, direct support (DS), and general support (GS) maintenance personnel with training in operating procedures, symptom analysis, and troubleshooting procedures.

Functional Description:

Device 09-23 is a computer-based training system, providing operating and maintenance characteristics for simulated M35A2C vehicle systems.

The device consists of a display panel of simulated M35A2C system components and vehicle test meter (VTM), an EC 3 computer, videodisc player and monitor, control console, two diskette drive units, visuals, two flexible diskettes, trainer power cable, operator's manual, and maintenance manual. An accessories box containing a simulated VTM current probe, tachometer probe, two pressure transducers and four cable assemblies are also supplied with the trainer.

This student/instructor operated device is designed for demonstration or system maintenance hands-on use and requires minimal familiarization time. No warm-up time, special cooling, or special maintenance personnel are required.

Student motivation is accomplished through 32 unique malfunction simulations and immediate performance feedback as the student operates the system and VTM.

Through the use of the control console, the simulated systems on the display panel respond with normal operation or system malfunctions similar to the actual vehicle systems. Student performance is monitored by indicators contained on the control console to indicate total time to solve the problem and components replaced.

DVC 09-23

Physical Information:
Length: 120 in.
Height: 71 in.
Depth: 29 in.
Weight: 485 pounds

Equipment Required, Not Supplied:
None

Special Installation Requirements:
The trainer is designed to operate in a standard classroom within a temperature range of 39°F to 100°F and a relative humidity of up to 80 percent.

Power Requirements:
115 volts, single-phase, 60 Hz 15 amps.

Applicable Publications:

TM 9-6910-252-10(u), Operator's Manual for M35A2C Troubleshooting Using STE/ICE, Device 9-23.

TM 9-6910-252-24&P(u), Organizational, Direct Support, and General Support Maintenance Manual Including Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts) for M35A2C Troubleshooting Using STE/ICE, Device 9-23.

Reference Publications:
TM 9-2320-209-20
TM 9-2320-209-20-2 Series

Training Requirements Supported:
MOSC 63B

SL1 091-499 Task

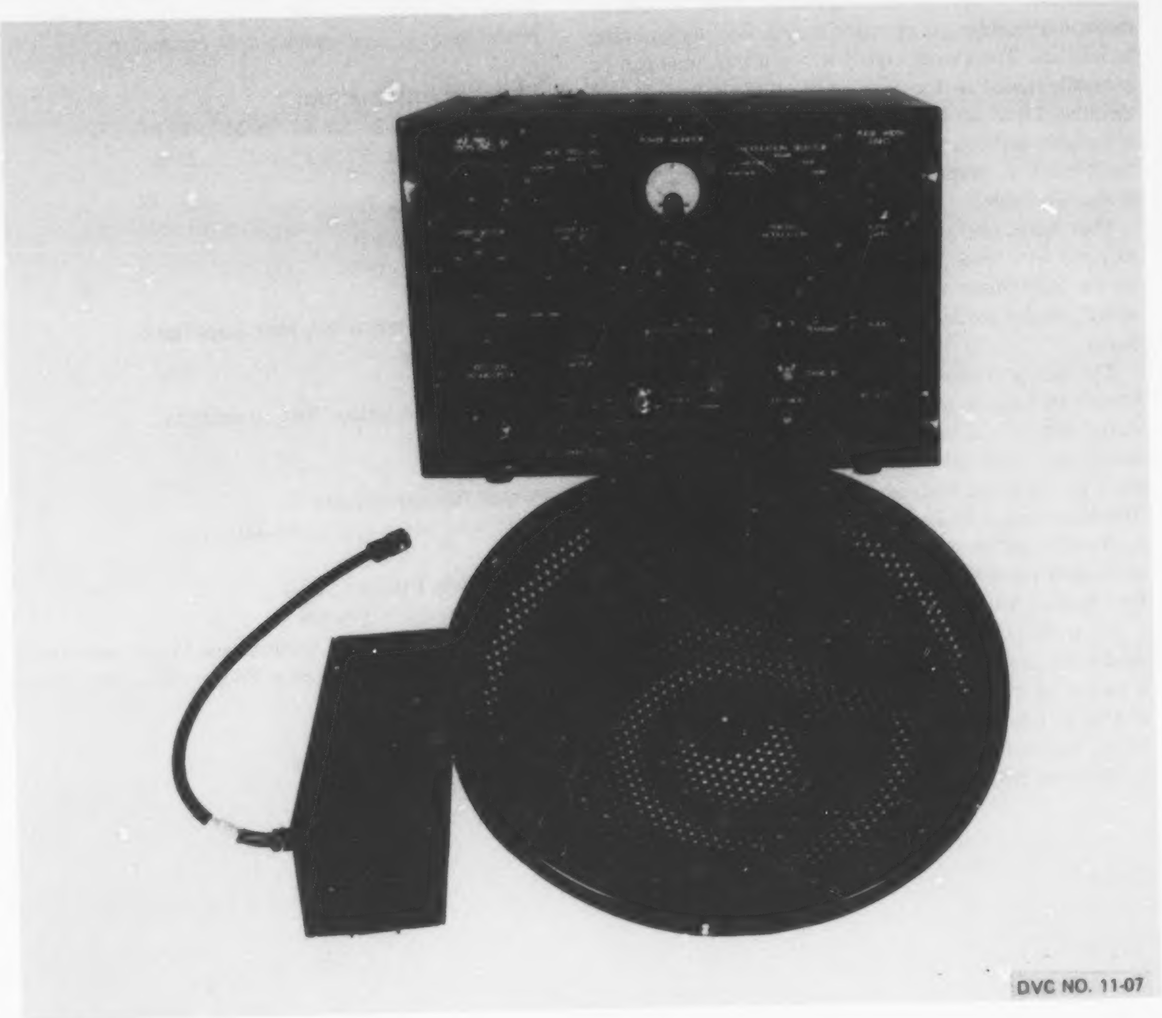
1120

1122

TRANSMITTING SET, COUNTERMEASURES TRAINING SIGNAL

DVC 11-07
AN/ULT-T2

NSN 6940-00-856-8176



DVC NO. 11-07

Training Category/Level Utilized:
Signal/Level 3

Logistic Responsible Command, Service, or Agency:
CECOM

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:
To provide a means of transmitting jamming signals in the X-band frequencies. The trainer is used to support radar operator training in antijamming controls and techniques.

Functional Description:
Countermeasures Training Signal Transmitting Set AN/UTL-T2 is a low-power radar transmitter capable of

generating and transmitting various types of interference signal in the 8500 to 9600 Mc radar X-band. The trainer is designed to operate in conjunction with an X-band radar and enables an operator to practice antijamming techniques. The carrier signal which it transmits can be manually tuned to the frequency of the radar set and modulated from an external source. The signal frequency is variable and can be set to any fixed frequency within the X-band. A swept signal frequency within the X-band is also available.

The characteristics of the transmitted signal may be adjusted with front panel controls. These characteristics are cw (continuous wave) frequency, sweep rate, sweep sector, percent modulation, type of modulation, and pulse width.

The trainer consists of a panel-chassis assembly and blower enclosed in a painted aluminum dust cover. It is stored and carried in a shock-resistant transit case with removable cover. Secured in the transit case cover, are the Operation and Maintenance Guide and accessories. The accessories consist of a horn antenna, power cable, an rf cable, and headset. The trainer, when enclosed in its olive-drab transmit case, is carried by means of hinge-type handles located at each side of the case.

The trainer is made up of five sections: power supply, modulator (containing four modulating signal circuits and a sweeping circuit), rf section (containing a klystron oscillator, tube mount, horn antenna, and wave guide), keyer, and audio amplifier.

The front panel features 11 operating controls which can be used by the instructor to select the type of interference signal desired. It also mounts receptacles for input power; operating, blower, and spare fuses; and external modulation, rf, and audio output connectors.

Physical Information:

Control unit: 20'' x 14'' x 20''; 95 lb
Horn antenna: 3'' x 3'' x 2''; 0.25 lb
Headset: 1 lb
Rf cable: 1 lb
Power cable: 2 lb
Transit case: 35 lb

Equipment Required, Not Supplied:

X-band radar

Special Installation Requirements:

None

Power Requirements:

110 vac, single-phase, 50-440 cycle

Applicable Publications:

TM 11-6940-205 Series

NAVEXOS P-1856, Operation and Maintenance Guide for Radar Signal Interference Trainer (X-Band), Device 15X12

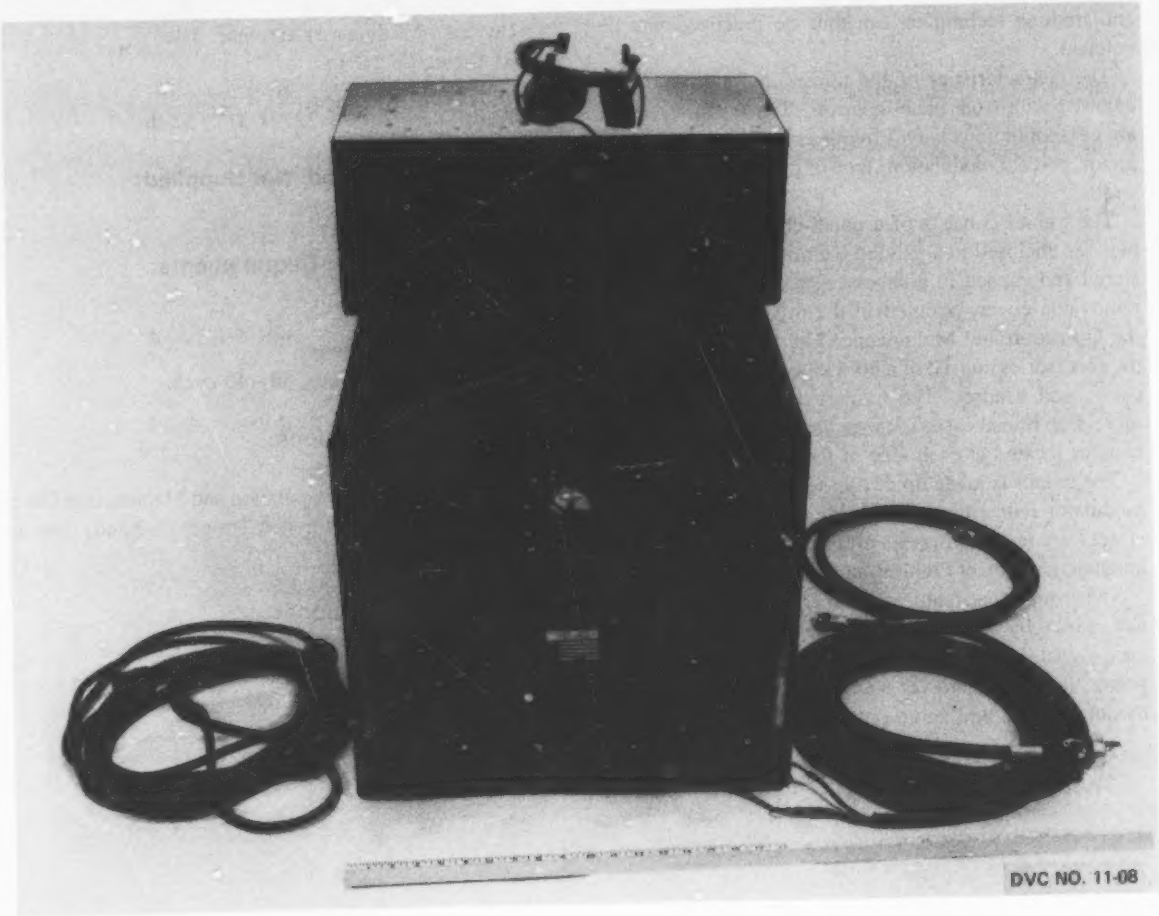
Reference Publications:

None

TRANSMITTING SET, COUNTERMEASURES TRAINING SIGNAL

DVC 11-08
AN/ULT-T3

NSN 6940-00-856-9906


DVC NO. 11-08

Training Category/Level Utilized:

Signal/Level 3

Logistic Responsible Command, Service, or Agency:

CECOM

Source and Method of Obtaining:

Available through local TASCs.

Purpose of Trainer:

To provide a means of transmitting jamming signals in the S-band frequencies. The trainer is used to support radar operator training in antijamming controls and techniques.

Functional Description:

The Radar Signal Interference Trainer (S-Band) is a low-power radar transmitter capable of generating and transmitting various types of interference signals in the 2500 to 3500 Mc radar S-bands. The trainer is designed to operate in conjunction with an S-band radar and enables an operator to practice antijamming techniques. The carrier signal which it transmits can be manually tuned to the frequency of the radar set and modulated in amplitude by a sine wave, square wave, pulse, noise, or modulation from an external source. The signal frequency is variable and can be set to any fixed frequency within the S-band. A swept signal frequency within the S-band is also available.

The trainer operating controls are calibrated and thus permit an instructor to recreate indentical jamming signals for individual students. The effect of each type of jamming signal on the radar set can be observed, and antijamming techniques can thus be practiced and developed.

The characteristics of the transmitted signal may be adjusted with front panel controls. These characteristics are cw (continuous wave) frequency, sweep rate, sweep sector, percent modulation, type of modulation, and pulse width.

The trainer consists of a panel-chassis assembly and blowers enclosed in a painted aluminum dust cover. It is stored and carried in a shock-resistant transit case with removable cover. Secured in the transit case cover are the Operation and Maintenance Guide and accessories. the accessories consist of a horn antenna, power cable, rf cable, and headset. The trainer, when enclosed in its olive-drab transit case, is carried by means of hinge-type handles located at each side of the case.

The trainer is made up of five sections: power supply, modulator (containing four modulating signal circuits), rf section (containing a carcinotron oscillator, horn antenna, and power divider), keyer, and audio amplifier.

The front panel features 11 operating controls which can be used by the instructor to select the type of interference signal desired. It also mounts receptacles for input power; operating, blower, and spare fuses; and external modulation, rf, and audio output connectors.

Physical Information:

Control unit: 21'' x 19'' x 30''; 160 lb
Horn antenna: 7'' x 8'' x 7''; 2 lb
Headset: 2'' diameter earpiece; 1 lb
Rf cable: 75''; 1 lb
Power cable: 300''; 2 lb
Transit case: 19'' x 22'' x 31''; 52 lb

Equipment Required, Not Supplied:

S-band radar

Special Installation Requirements:

None

Power Requirements:

110 vac, single-phase, 50-440 cycle

Applicable Publications:

TM 11-6940-208 Series

NAVEXOS P-1185, Operation and Maintenance Guide for Radar Signal Interference Trainer (S-Band), Device 15X17.

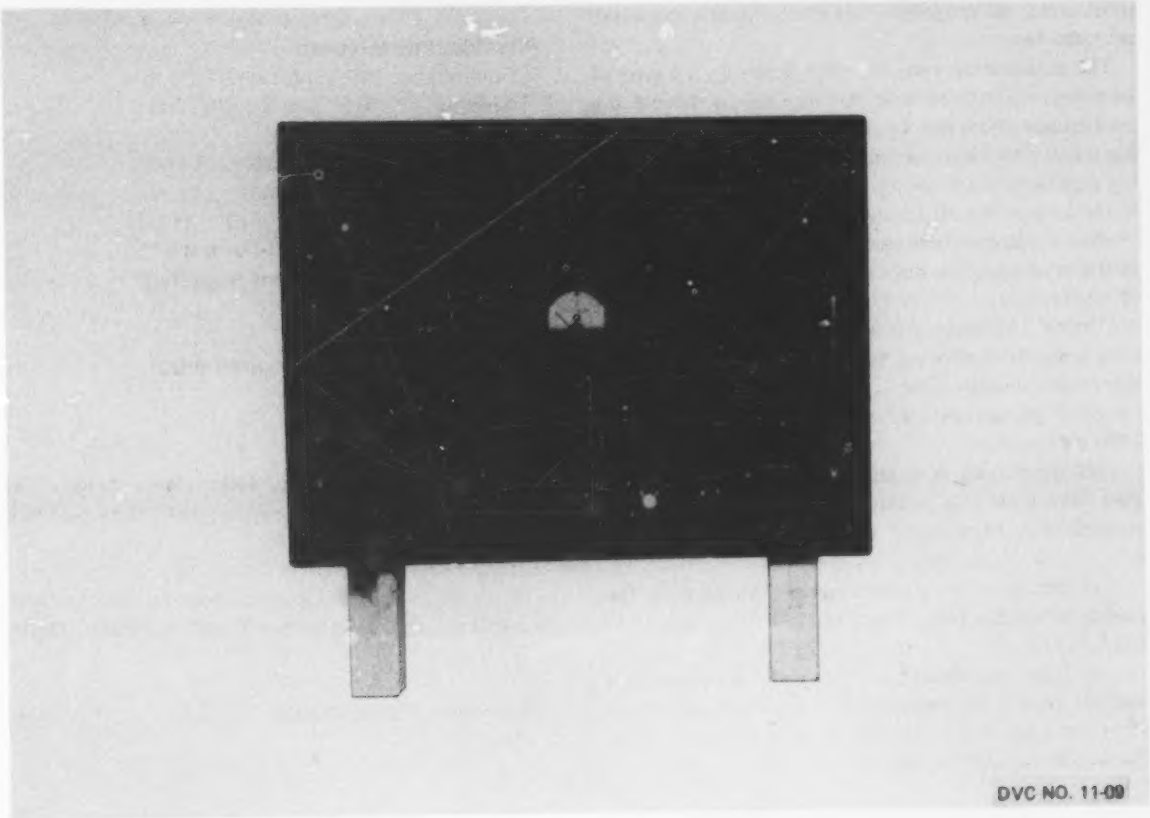
Reference Publications:

None

TRANSMITTING SET, COUNTERMEASURES TRAINING SIGNAL

DVC 11-09
AN/ULT-T4

NSN 6940-00-856-9908



DVC NO. 11-09

Training Category/Level Utilized:
Signal/Level 3

Logistic Responsible Command, Service, or Agency:
CECOM

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:

To provide a means of transmitting jamming signals in the L-band frequencies. The trainer is used to support radar operator training in antijamming controls and techniques.

Functional Description:

The Radar Signal Interference Trainer is an interference signal generator used to produce and transmit various types of radar interference that may be displayed on radar scopes, particularly during a tactical situation. This is accomplished by generating L-band frequencies (1220 to 1350 Mc), which may be internally or externally modulated. The front panel controls permit the selection of signal characteristics desired by the instructor for a particular problem. Varying the limits of the problem will, in turn, vary the information presented on the radar indicator. When used in this manner, there is practically an unlimited number of possibilities available for training purposes.

The trainer is designed to be operated by an instructor in the proximity of an L-band radar set for the purpose of transmitting sufficient rf output power to jam the radar receiver. The type of interference signal and its characteristics may be varied by the instructor during the period of instruction.

The trainee must recognize the jamming, the type of jamming, and try to read the true signal despite the interference. With this in mind, the trainer, by simulating actual interference signals, aids the trainee in becoming proficient in the use of antijamming techniques and in the recognition of jamming signals.

Over a period of time, therefore, the student develops skill in reading signals through varying amounts and types of interference.

Under the instructor's control, the trainer is capable of generating the following types of unmodulated cw or amplitude modulated cw:

a. Unmodulated cw frequencies between 1220 and 1350 megacycles.

b. Sine wave modulated cw. Modulation is variable from 0 to 100 percent. Modulation frequency is variable from 15 cps to 15 kc or fixed at 50 kc and 100 kc.

c. Square wave modulated cw. Modulation frequency is variable from 15 cps to 15 kc or fixed at 50 kc and 100 kc.

d. Pulse modulated cw. Pulse width is continuously variable from 1 microsecond to 5 microseconds. Pulse repetition frequency is variable from 15 cps to 15 kc, or fixed at 50 kc and 100 kc.

The trainer has a frequency range from 1220 to 1350 megacycles with power output of at least 2 milliwatts at any frequency over the band.

Physical Information:

Control unit: 19'' x 14'' x 12''; 50 lb
Antenna: 12'' x 9'' x 4''; 11 lb
Headset: 1 lb
Rf cable assembly: 72''; lb
Power cable assembly: 300''; 2 lb
Transit case: 23'' x 18'' x 19''; 45 lb

Equipment Required, Not Supplied:

L-band radar

Special Installation Requirements:

None

Power Requirements:

110 vac, single-phase, 50-440 cycle

Applicable Publications:

TM 11-6940-207 Series

NAVEXOS P-1847, Operation and Maintenance Guide for Radar Signal Interference Trainer (L-Band), Device 15X18

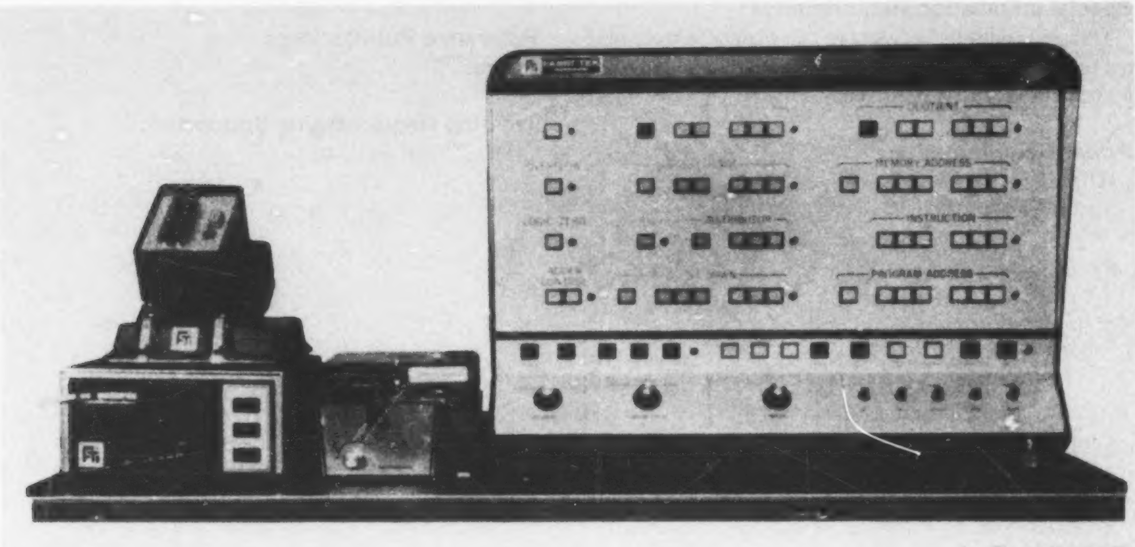
Reference Publications:

None

BI-TRAN SIX COMPUTER EDUCATION SYSTEM TRAINER

DVC 11-21
6F6

NSN 6930-01-075-8371



DVC NO. 11-21

Training Category/Level Utilized:
Signal/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to demonstrate the operating theory and maintenance of a basic digital computer, and to instruct students in a wide range of digital computer functions, from simple numerical instructions to complex elements of computer design with the same device. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The BI-TRAN SIX is a small, modern digital computer which has the functions of a full-scale operational computer. Each internal electronic and logical function is exposed to the students' view and control.

Control features allow the principles of computer design, operation, programming, and maintenance to be explored with clarity. The device can aid in teaching the following computer science elements:

a. Binary arithmetic
b. Computer machine design
c. Computer logic
d. Programming and program debugging
e. Computer circuits
f. Computer operation
g. Computer arithmetic
h. Boolean algebra
i. Computer maintenance and troubleshooting

Operation of the above is accomplished in one of four basic modes: Program Mode, Instruction Mode, Acquisition/Execution Mode, and Distributor Mode.

Complementary peripheral equipment consists of: Paper Tape Punch, Paper Tape Reader, and Paper Tape Strip Printer.

Physical Information:
BI-TRAN SIX Digital Computer: 32" x 17" x 23"; 98 lb
Paper tape punch: 10" x 12" x 11"; 15 lb
Paper tape reader: 10" x 9" x 7"; 15 lb
Strip printer: 13" x 14" x 6"; 26 lb

DVC 11-21

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Climatic controlled classroom that maintains the ambient room temperature at 70°F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:
110 vac

Applicable Publications:
Instruction Manual for BI-TRAN SIX Computer Education System, Device 6F6.

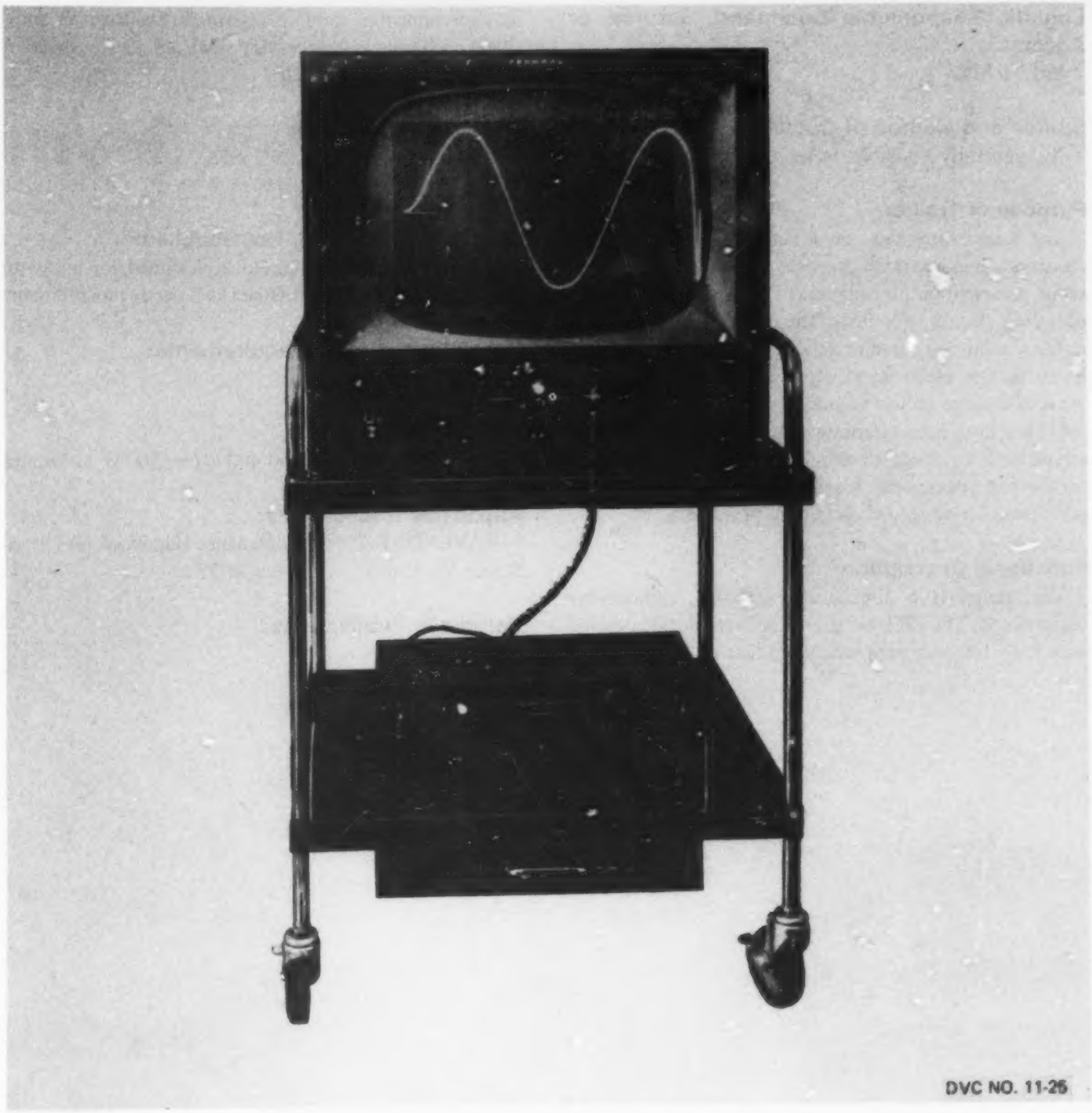
Reference Publications:
None

Training Requirements Supported:
MOSC 34E and 34H

LARGE-SCREEN OSCILLOSCOPE TRAINER

DVC 11-25
11D7

NSN 6930-01-075-8372



DVC NO. 11-25

DVC 11-25

Training Category/Level Utilized:
Signal/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The trainer provides, on a screen large enough for classroom demonstration purposes, a cathode-ray oscilloscope presentation of voltage and current waveforms in operating electronic circuits. The trainer is for use in any military training course or school for basic or advanced instruction on electronics, where it is necessary to give lectures to large groups of students. It may be used as an aid in teaching circuit training, troubleshooting, dynamic circuit analysis, basic electronic principles, principles of oscilloscope operation, Lissajous pattern analysis, and other basic or advanced electronic principles.

Functional Description:

The trainer is a direct-view, 21-inch, cathode-ray oscilloscope. The CRT has a 110° deflection and is coated with P-4 white phosphor which produces a high-intensity trace of medium persistence. It has good linearity, and high sensitivity.

The device includes its own power supply chassis, and an interconnecting cable is provided. No driver or additional oscilloscope is necessary since the device is a complete oscilloscope in itself.

Physical Information:
Oscilloscope cabinet: 25'' x 23'' x 27''; 138 lb
Power supply cabinet: 19'' x 7'' x 10''; 42 lb

Equipment Required, Not Supplied:

Roller cart shown in photo is designed for use with this trainer, but must be obtained as separate procurement.

Special Installation Requirements:
None

Power Requirements:
110 vac, single-phase, 50-400 cycle, 560 W maximum

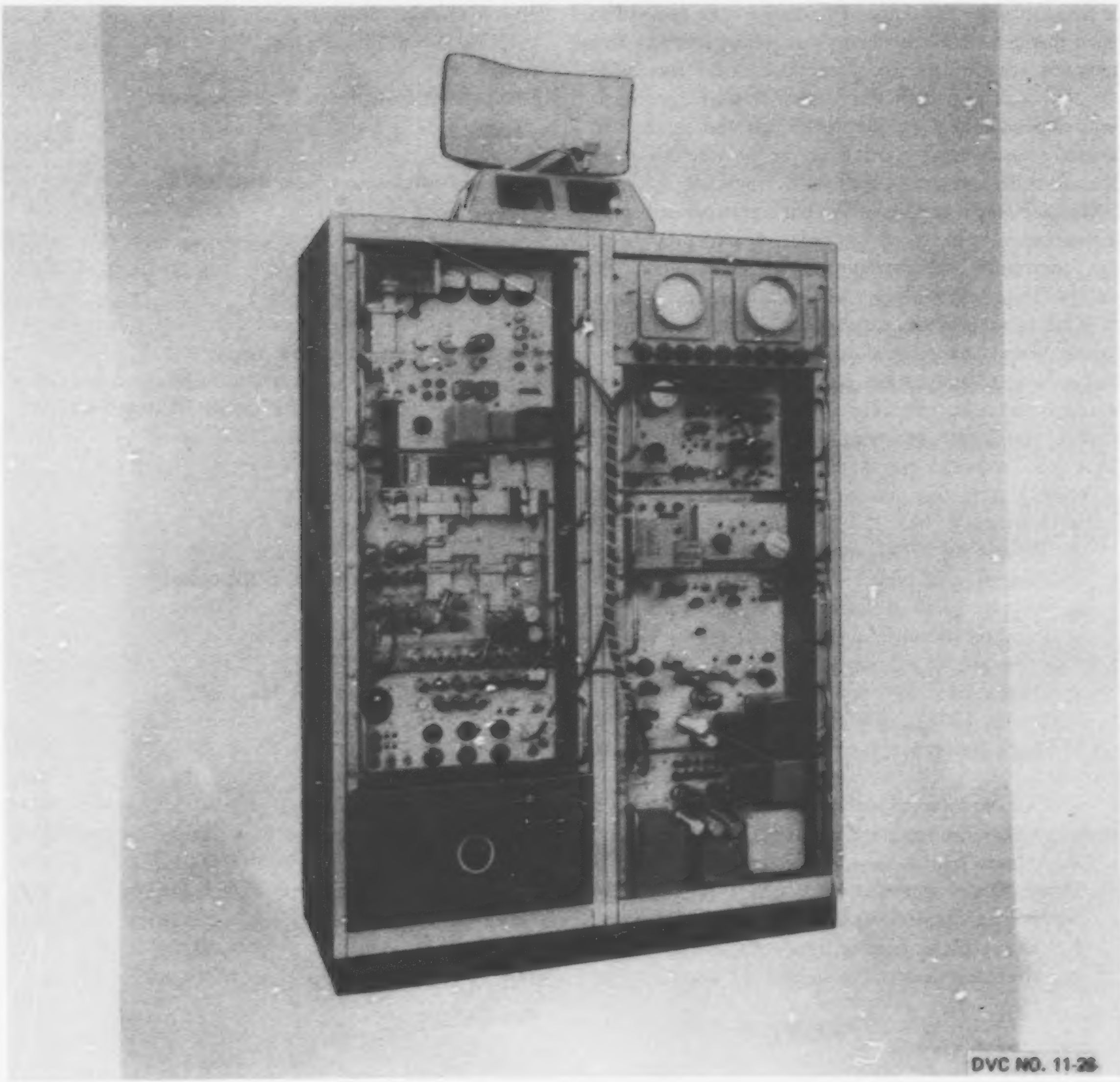
Applicable Publications:
NAVEXOS P-2598, Maintenance Handbook for Large-Screen Oscilloscope, Device 11D7

Reference Publications:
None

RADAR REPAIR TRAINER

DVC 11-26B
11D8A

NSN 6940-01-075-8373



Training Category/Level Utilized:
Signal/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide a means of demonstrating the principles and procedures related to the installation, calibration, operation, and maintenance of typical search radar systems, and to train technicians having a fundamental knowledge of electronics in basic radar circuitry. The specific training requirements supported are shown following the descriptive data.

DVC 11-26B

Functional Description:

The trainer is a low-power, operational, X-band radar set which is specifically designed for use as a classroom or laboratory demonstrator. The device may be used to teach maintenance level theory of overall radar system operation, as well as theory peculiar to the five basic component parts of typical systems. Realistic presentations and situations can be developed and tailored to introduce basic and advanced concepts, provide skill practice and drill, and test student proficiency.

Modular design permits individual and integrated study and operation of the five basic radar system components (i.e., transmitter, receiver/duplexer, antenna, indicator, and synchronizer). Roll-over bars facilitate bench setups; physical layout provides easy accessibility. Plug-in component boards may be altered to introduce planned malfunctions. Multiple test points facilitate connection of test equipment, minimize physical labor aspects of training, and thereby increase efficiency of training cycle. An A-scope indicator may be used as a test oscilloscope.

Technical operating parameters are as follows:

a. Frequency: 8900 to 9400 Mc

b. Wavelength: 3 cm approximately

c. Peak radiated power output: 1000 W maximum

d. Average radiated power output: 2 W maximum

e. Pulse repetition frequency: 2000 cps

f. Pulse length: 0.8 ms

g. Duty cycle: 0.002 approximately

h. Range: 12,000 meters maximum

i. Operating ranges: 0 to 6000 m/yd; 0 to 12,000 m/yd

j. Type of presentation: 5-inch electromagnetic CRT for PPI; 5-inch electrostatic CRT for "A" scope

k. Antenna operation:
Continuous: 6 rpm in one direction of rotation only
Manual: In either direction of rotation

l. Receiver: Intermediate frequency: 30 Mc

m. Minimum discernible signal: -97 dBm

n. Bandwidth: 2.4 Mc

o. Noise figure: less than 10 dB maximum

Physical Information:

42" x 22" x 78"; 800 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

NAVEXOS P-2273, Operation and Maintenance Guide with Parts Catalog for Radar Repair Training Set (RMT-100A), Device 11D8A

Reference Publications:

None

Training Requirements Supported:

MOSC 26D

SM 113-584 Tasks

0003
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GENERATOR, INTERFERENCE TRAINING

DVC 11-34B
AN/URA-T1B

NSN 6940-00-543-1176

DVC NO. 11-34

Training Category/Level Utilized:
Signal/Level 2

Logistic Responsible Command, Service, or Agency:
CECOM

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:
For classroom use to train students in jamming and interference experienced in radio communications. The training generator is used with enemy radio communications. The device is also used with code-practice systems to train operators to recognize coded signals when jamming interference is present.

Functional Description:
Modulator MD-22/URA-T1 consists of a drawer-type chassis with a front panel. The drawer-type chassis is mounted in a case that has a leather carrying handle and a canvas cover. The operational controls and the input and output connectors are located on the front panel. Two adjustment controls and two fuses are located on the modular chassis. The modular case is provided with a pair of slides to receive the modulator chassis. The modulator chassis is secured in its case by a modulator-chassis luggage catch on each side. Two luggage catches on the top-back edge of the case secure the hinged panel of a storage compartment. A mounting luggage catch at each bottom corner of the modulator case secures the modulator to Mounting FT-250. The mounting consists of two steel frames fastened together at the four corners with rubber shock mounts.

Physical Information:
26'' x 12'' x 18''; 42 lb

Equipment Required, Not Supplied:
a. A 6V storage battery, a 12V storage battery, or a 110 vac power supply
b. Headset H-16/U, or equivalent, for monitoring purposes
c. Microphone T-17, or equivalent, for communication purposes.

Special Installation Requirements:
None

Power Requirements:
6 vdc operation, 24 W
12 vdc or 110 vac operation, 35 W

DVC 11-34B

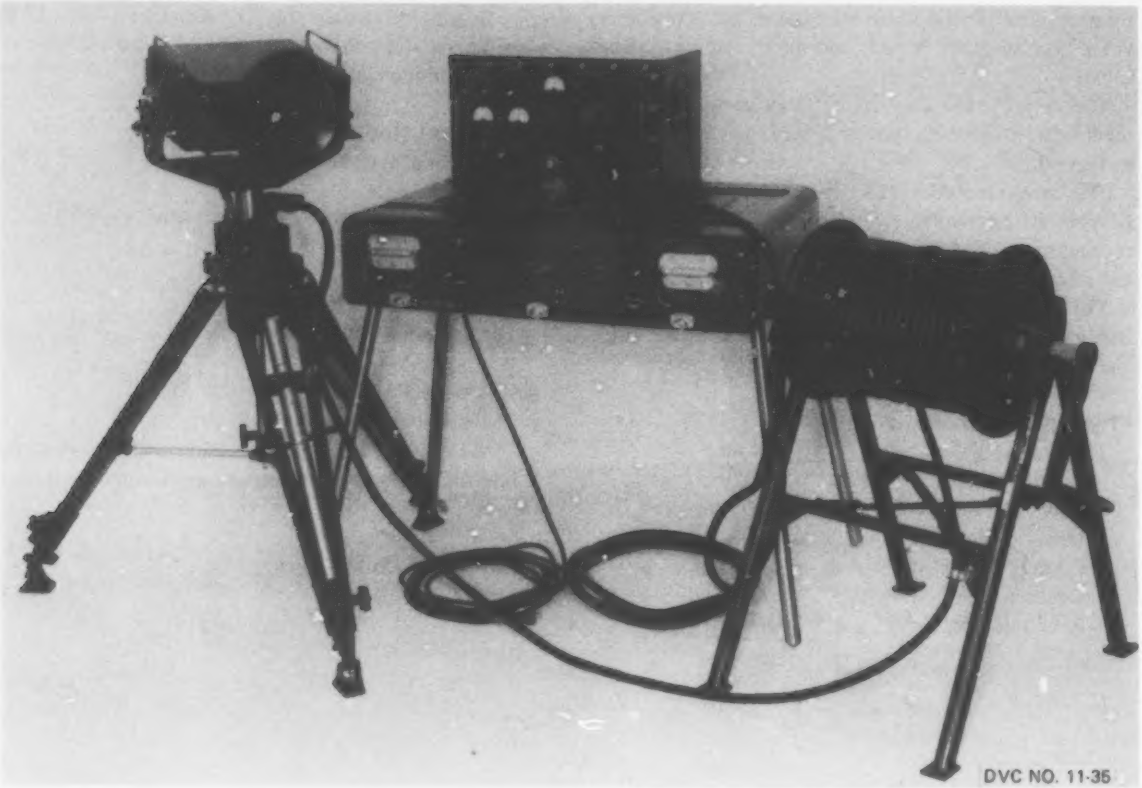
Applicable Publications:
None

Reference Publications:
None

TRAINER, RADAR, AN/ULT-T5

DVC 11-35
15E5

NSN 6940-00-952-3387



DVC NO. 11-35

Training Category/Level Utilized:

Signal/Level 2

Logistic Responsible Command, Service, or Agency:

CECOM

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

To provide a means of transmitting jamming signals in the K-band frequencies in support of radar operator training, in the classroom or outdoor training area, in antijamming controls and techniques.

Functional Description:

Radar Signal Interference Trainer (K-Band) is a low-power radar transmitter capable of generating and transmitting various types of interference signals in the 12.5 to 17.5 GHz radar K-Band. The trainer is designed to operate in conjunction with a K-Band radar, such as the AN/MPQ-4A, and enables an operator to practice anti-jamming techniques. The transmitted signal can be manually tuned to the frequency of the radar set. It can be modulated in amplitude by sine waves, square waves, pulses, noise, or modulating signals from an external source. It can also be frequency-modulated by sine waves. The modulation frequencies are variable and can be set to any value between 15 cps and 15 kc. It can also be set at 50 kc or 100 kc.

The characteristics of the transmitted signal may be adjusted by use of the front panel controls. These characteristics are carrier frequency, type of modulation, modulation frequency, percent modulation, percent FM deviation, and pulse width. The resultant signals appear on the trainee's radar indicator as various types of jamming.

The trainer consists of three basic groups of equipment: the control unit, the transmitter unit, and accessories. The entire trainer is packed in two transit cases. Transit case I contains the equipment require at the instructor's site: the control unit, 200-foot cable and reel assembly, Reel Unit RL-31, power cable, 20-foot control cable, and instructor's headset. Transit case II contains the equipment required at the transmitting site: the transmitter, yoke, bearing drive, tripod, and the transmitter jumper cable.

The control unit consists of front panel assembly, modulator, low-voltage power supply, and audio (monitor) amplifier.

The transmitter consists of backward wave oscillator (BWO), its high-voltage power (rf) power supply and regulator, AM/FM modulation amplifiers, and antenna and microwave hardware.

The accessories consist of bearing drive assembly, transmitter tripod, yoke assembly, and 200-foot cable and reel assembly, and Reel Unit RL-31.

Physical Information:

Transit case I: 38'' x 28'' x 23''; 94 lb
  Control unit: 19'' x 13'' x 15''; 68 lb
  Cable and reel assembly: 2400''; 95 lb
  Power cable assembly: 300''; 2½ lb
  Control cable: 240''; 10 lb
  Headset: 1 lb
  Reel unit: 35'' x 24'' x 4''; 30 lb
Transit case II: 38'' x 28'' x 24''; 87 lb
  Transmitter: 20'' x 17'' x 7''; 39 lb
  Yoke assembly: 19'' x 8'' x 3''; 7 lb
  Bearing drive assembly: 9'' diameter x 13''; 12 lb
  Tripod: 10'' diameter x 36'' (retracted); 28 lb
  Transmitter jumper cable: 24''; 2 lb

Equipment Required, Not Supplied:

Operational K-band radar

Special Installation Requirements:

None

Power Requirements:

110 vac, single-phase, 50-440 cycle

Applicable Publications:

TM 11-6940-209 Series

NAVEXOS P-2267, Operation and Maintenance Guide for Radar Signal Interference Trainer (K-Band), Device 15E5

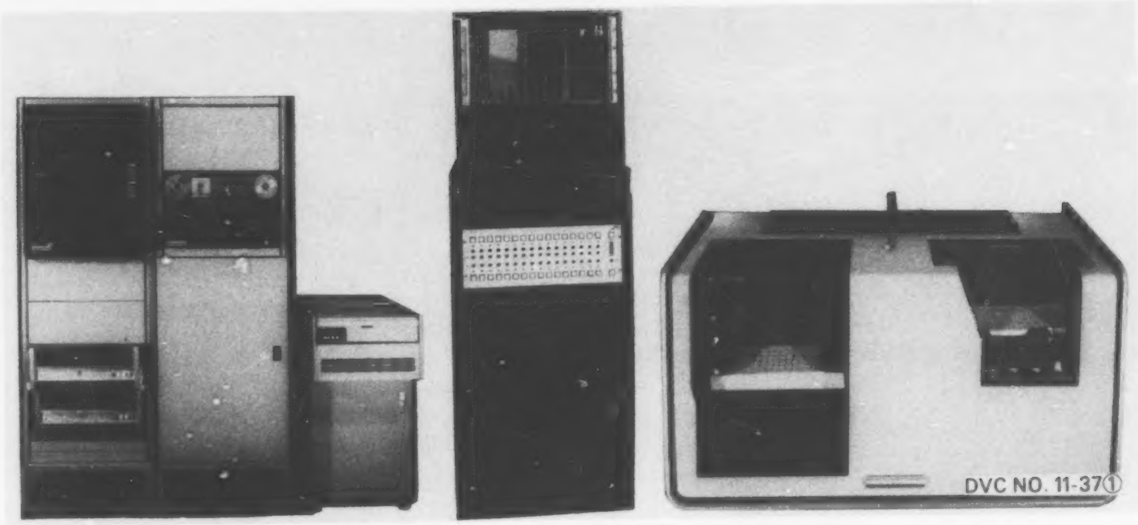
Reference Publications:

None

DIGITAL COMPUTER TRAINER

DVC 11-37
6F5A

NSN 6930-01-075-8374



Training Category/Level Utilized:

Signal/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer provides support to instructors and students in a multiuser real-time environment in multidivision artillery wargaming simulations and computer aided instruction, to include a computerized self-teaching programming course. Programming is available in Basic enhanced, Fortran, Cobol, and Assembly languages. This multiuser environment is being used by all departments within the Field Artillery School by 22 remote users.

Functional Description:

The device is a third-generation microprogrammed integrated circuit digital computer consisting of a processor system with input/output devices as follows: teletypes, graphics display terminals, card readers, magnetic tape, disks, line printer, punched paper tape, and telecommunication equipment. It features a large comprehensive instruction set for bit, byte, half-word, and full-word operations. The memory field is expandable with direct access to one-million bytes. Present system consists of 393,000 bytes of memory internally. Two sets of 32-bit general registers, 16 registers per set can be used for indexing or accumulators with a 300 nano-second access time. The dual bus architecture supports up to 1,024 input/output devices. The extended direct memory access bus can support 16 high-speed devices on each of 7-selector channels. The multiplexer handles the low-speed devices.

Physical Information:

The Computer Trainer consists of two cabinets, 23'' by 69'' by 24'', weighing approximately 250 lbs each. Magnetic tape and 2.5 MB disks are mounted in one cabinet with the high-speed paper tape reader, display panel and processor mounted in the other, other peripheral devices are as follows:

ASR-35 Teletype: 24'' x 24'' x 36''; 225 lb

21 stands with ASR-33 Teletypes: 33'' x 22'' x 19''; 75 lb

Soroban card reader: 23'' x 13'' x 13''; 55 lb

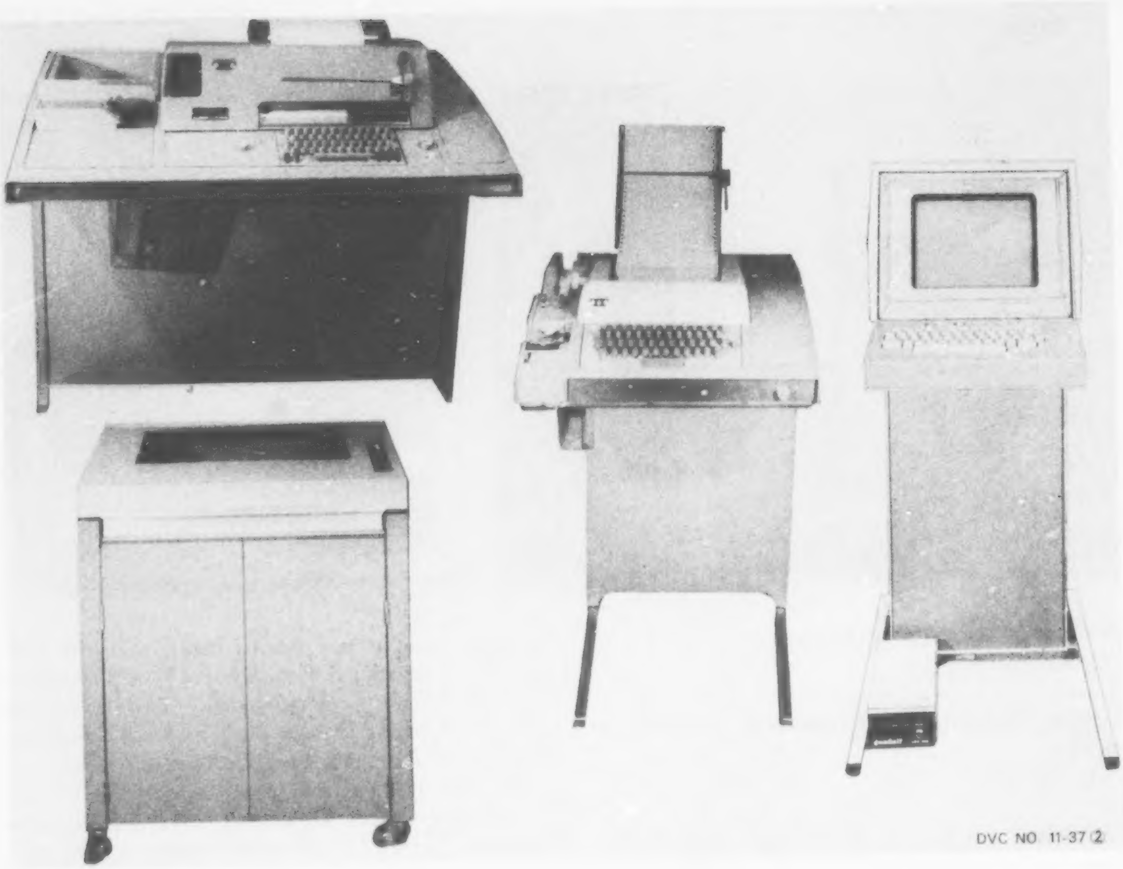
Line printer: 44'' x 36'' x 25''; 650 lb

Techtronics graphics terminal: 41'' x 18'' x 28''; 85 lb (with Grandalf Modem for remote operation)

80 megabyte disk: 35'' x 20'' x 35''; 185 lb

Telecommunication equipment: 72'' x 22'' x 22''; 250 lb

DVC 11-37



DVC NO 11-37 ②

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Facility 240'' x 240'' minimum

Power Requirements:
110 vac; 12 receptacles required

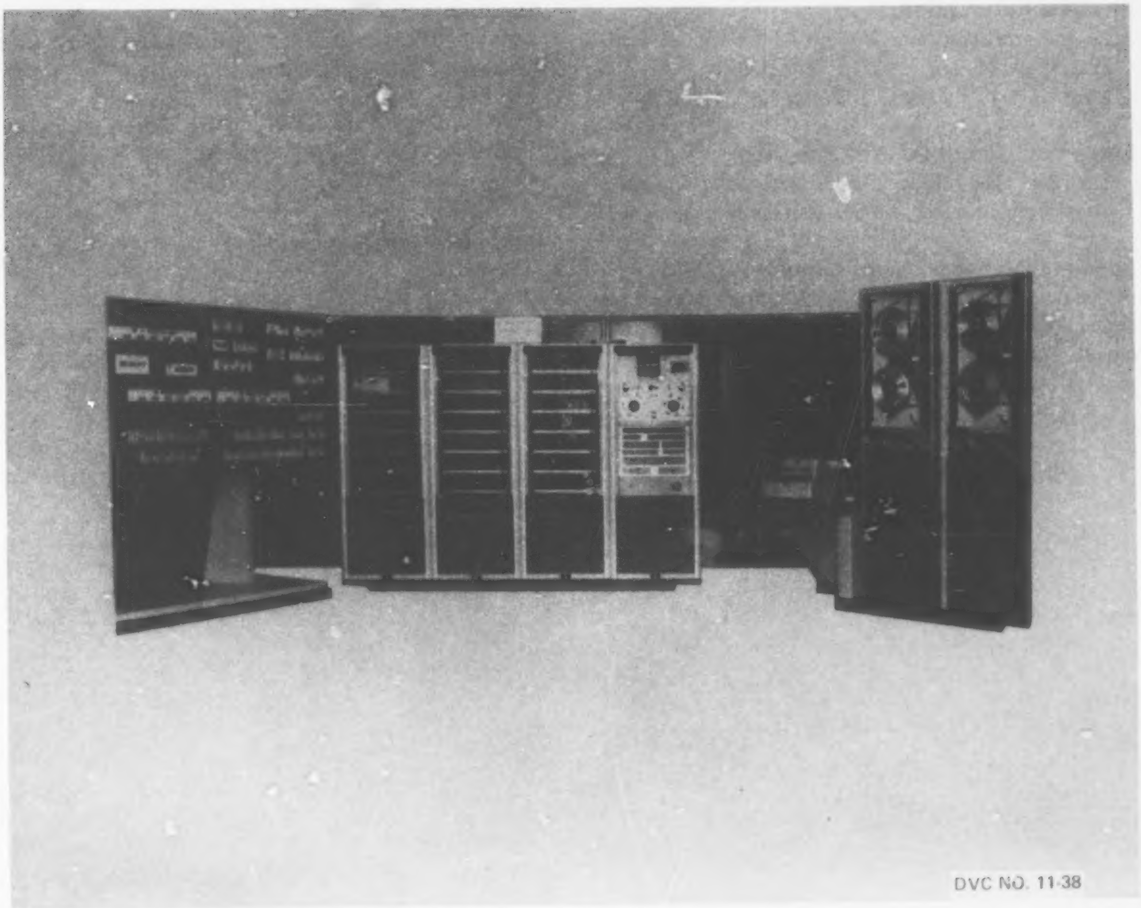
Applicable Publications:
NAVTRADEV P-3401
NAVTRADEV P-3402
NAVTRADEV P-3403

Reference Publications:
None

DIGITAL COMPUTER MAINTENANCE TRAINER

DVC 11-38
6F2A

NSN 6930-01-075-8375



DVC NO. 11-38

Training Category/Level Utilized:
Signal/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to demonstrate the functional organization, theory, and operation of general purpose computers, and to establish maintenance techniques to be used to troubleshoot and repair similar devices. This trainer is intended for use in the training of both computer operators and maintenance technicians. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is made up of three units mounted on casters for movability. The central processor contains the basic computer logic, including memory and the paper tape reader. The display panel presents a visual indication of the binary information contained in the register, the state of the various counters, and general configuration of data flow between the basic computer elements. The magnetic tape unit is composed of two magnetic tape handlers and a Flexowriter with an off line paper tape facility. Three electrical cables (two signal and one ac power) connect the central processor to the magnetic tape unit, and one cable supplies the signal power from the central processor to the lamps on the display panel.

Physical Information:

Central processor unit: 96'' x 27'' x 67''; 2,200 lb
Display panel: 27'' x 92'' x 75''; 520 lb
Magnetic tape unit: 83'' x 27'' x 77''; 1,800 lb

Equipment Required, Not Supplied:

Tektronix Oscilloscope, Model 585, or equivalent
Simpson Multimeter, Model 260, or equivalent

Special Installation Requirements:

Classroom, 300'' x 384'', with climatic control that maintains the ambient room temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

110 vac, 40 A per phase, 2-phase, 60 cycle

Applicable Publications:

NAVEXOS P-2669 Series, Operation and Maintenance Handbook with Parts Catalog, with Change No. 1

NAVTRADEV P-2669-R1 Series

NAVTRADEV P-3800 Series, Commercial Manuals for peripheral equipment

Reference Publications:

None

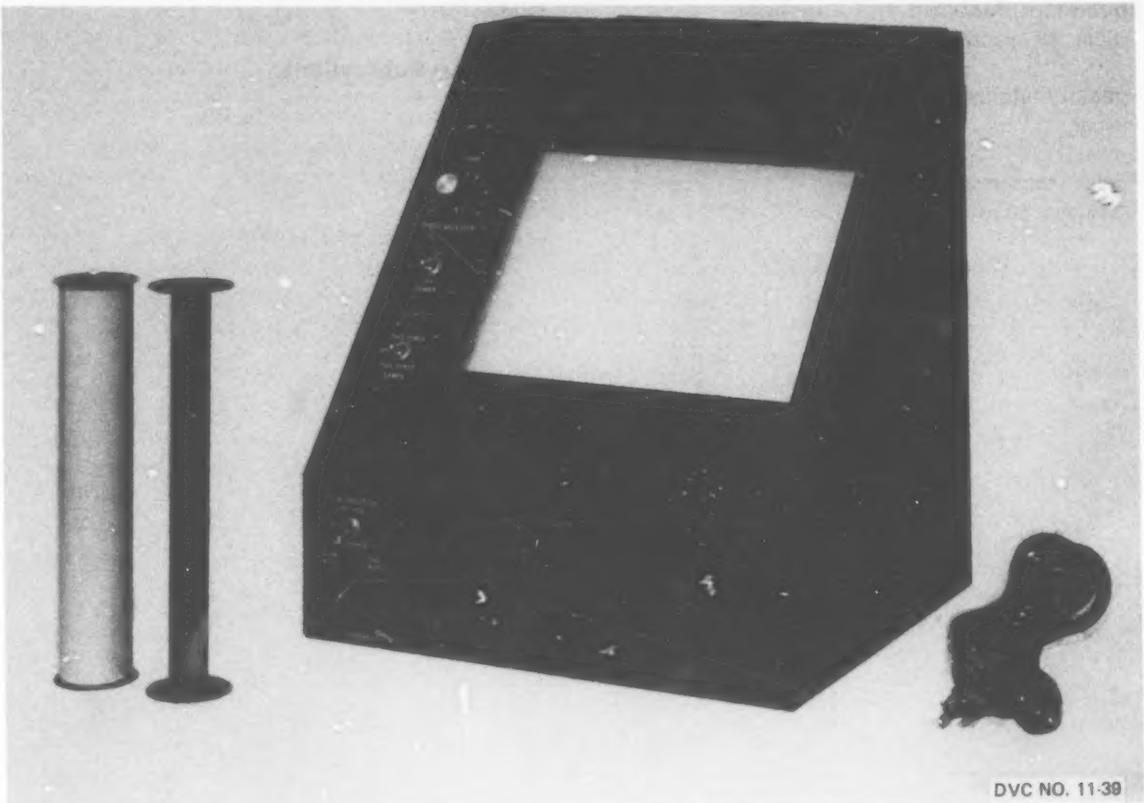
Training Requirements Supported:

MOSC 34E and 34H

RAPID DATA PROCESSOR, FILM VIEWER

DVC 11-39
15H18

NSN 6930-01-075-8376



DVC NO. 11-39

Training Category/Level Utilized:
Signal/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The device provides a means of training airborne operators in the interpretation of radar film. It simulates the continuous film feed of side looking radar at rates equivalent to those determined by the altitude and speed of the aircraft.

Functional Description:

The trainer is a tabletop device equipped with a motor-driven film transport capable of operating in either direction with a continuously variable speed adjustment over a range of 0 to 2 in/sec. The unit handles 9½'' wide by 600'' rolls of film and provides direct viewing through a filtered window in the sloping front panel. It has a high and a low illumination level with the low level half that of the high level.

DVC 11-39

Physical Information:
12" x 14" x 15"; 27 lb

Equipment Required, Not Supplied:
Film and spools

Special Installation Requirements:
None

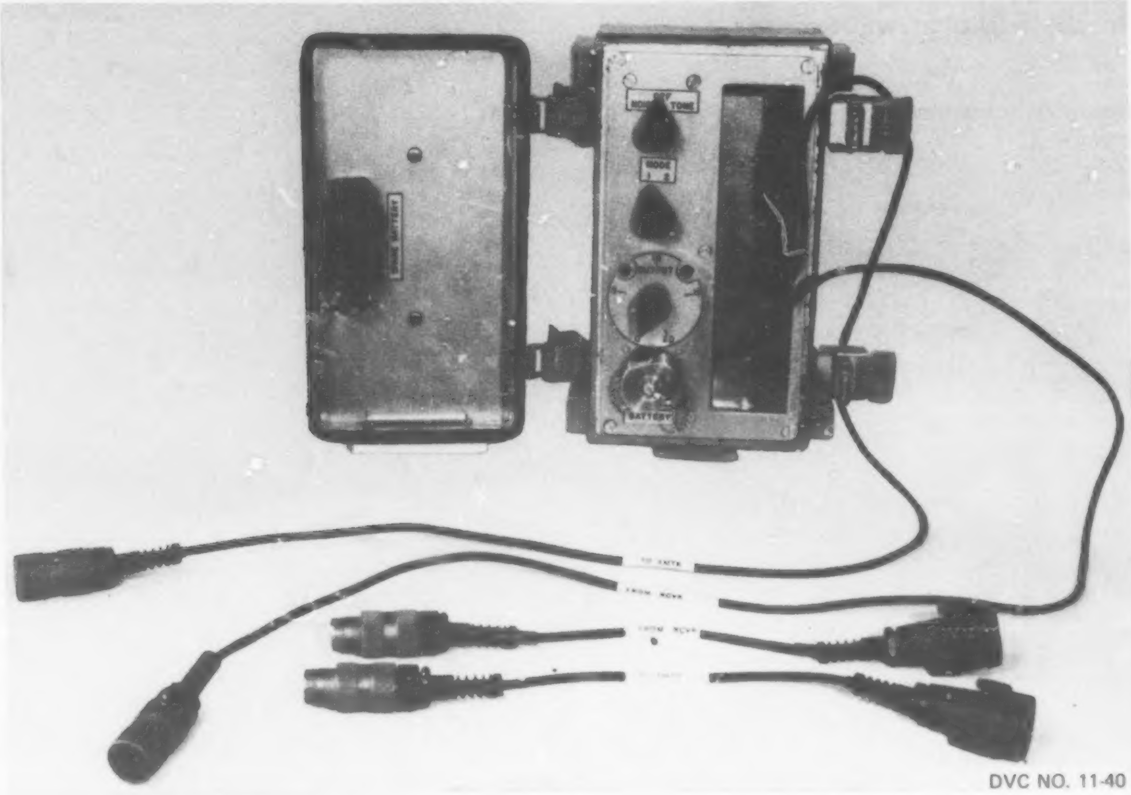
Power Requirements:
110 vac, 60 cycle

Applicable Publications:
NAVTRADEV P-3674 (U), Operation and Maintenance Guide for Rapid Data Processor, Film Viewer, Device 15H18.

Reference Publications:
None

INTERFERENCE GENERATOR TRAINER SG-886T/UR

DVC 11-40 NSN 6940-00-474-9495



DVC NO. 11-40

Training Category/Level Utilized:
Signal/Level 2

Logistic Responsible Command, Service, or Agency:
CECOM

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:
For classroom or field use to provide practical experience to students and field radio operators in the recognition, identification, and categorization of different types of interference. The interference generator is used to train students to exercise proper procedures to distinguish between intentional and accidental jamming, and to promote proficiency in copying through interference that does not completely disrupt communications.

Functional Description:
The training device operates in the 2-76 MHz range and is capable of producing tone and noise interference which is used to modulate standard tactical amplitude modulation (AM), frequency modulation (FM), and single side band (SSB) radio transmitters. It has two types of output (referred to as modes) that are compatible with the input levels of the AN/VRC-12, AN/PRC-77, and the AN/GRC-106 series of radio sets. The countermeasure set will allow AM/FM and SSB equipment to be used as communication jammers. External modulation received by a separate receiver can be fed through the device to modulate radios to provide additional electronic countermeasures training and jammer modulation.

Physical Information:
Transit case and generator unit assemblies: 9'' x 5'' x 4''; 5 lb

DVC 11-40

Equipment Required, Not Supplied:
Dry battery, BA-1363U

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
TM 11-6940-210-14, Operator's, Organizational, Direct Support, and General Support Maintenance Manual

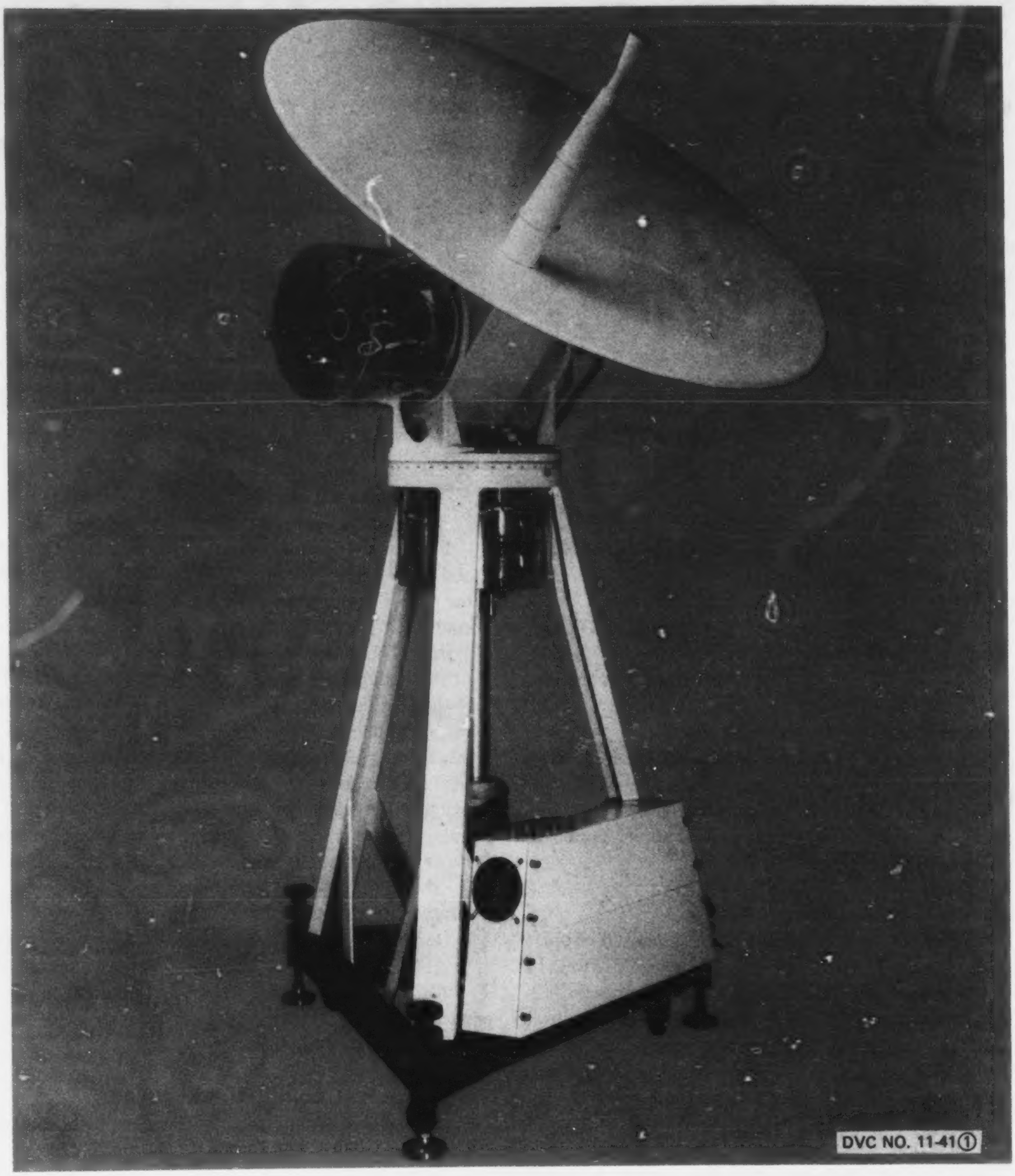
Reference Publications:
TM 11-5820-401 Series
TM 11-5820-398-12
TM 11-5820-498-12
TM 11-5820-520-12

best copy available

SATELLITE COMMUNICATIONS EARTH TERMINAL REPAIR TRAINER

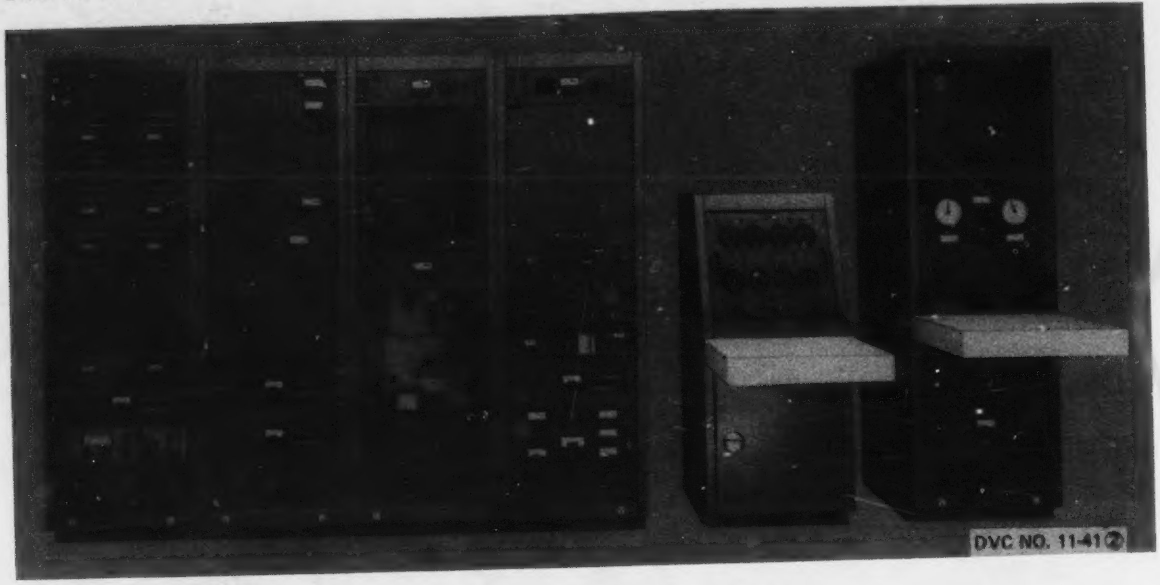
DVC 11-41
8H9

NSN 6930-01-075-8377



DVC NO. 11-41①

DVC 11-41


DVC NO. 11-41②

Training Category/Level Utilized:
Signal/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide a simulator to train students in the operation, maintenance, troubleshooting, and repair of equipment which is typical of satellite communications earth terminals. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is a functional system composed of operational circuits which are representative of those found in existing satellite communication earth terminals, i.e., AN/MSC-46, AN/TSC-54, AN/FSC-78/79. Controls, monitoring indicators, and alarms are also typical of existing satellite communication equipment. The trainer is composed of the following major assemblies:

a. Modulator
b. Exciter
c. Power amplifier (including liquid cooler and dehydrator)
d. Beacon demodulator
f. Communication demodulator
g. Baseband
h. Antenna mockup
i. Antenna positioning system

Each major assembly contains its own power supply and can therefore function independently when provided the proper stimuli. When the major assemblies are interconnected, they are capable of functioning as a complete system. The frequencies and signal levels are characteristic of typical super high frequencies earth terminals. The rf signal is not radiated, but is provided by coaxial cable to a satellite simulator which allows two devices to be interconnected for back-to-back communication. An Instructor's Console is also provided to allow approximately 100 realistic malfunctions to be inserted. The trainer layout is specifically designed to enhance maintenance and troubleshooting.

Physical Information:
Cabinets: 24'' x 24'' x 72'' (nine); 24'' x 36'' x 48'' (one)

Antenna: 60'' high with 48'' simulated parabolic reflector

Total weight: 4,200 lb

Equipment Required, Not Supplied:
General test equipment associated with the Satellite Communication Earth Terminal Course, 26Y20

Special Installation Requirements:
None

DVC 11-41

Power Requirements:
110/220 vac, 20 A per phase, 3-phase, 4-wire, 60 cycle

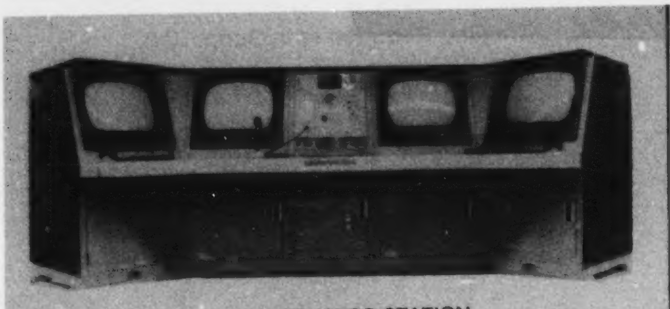
Applicable Publications:
NAVTRADEV P-4018 Series

Reference Publications:
None

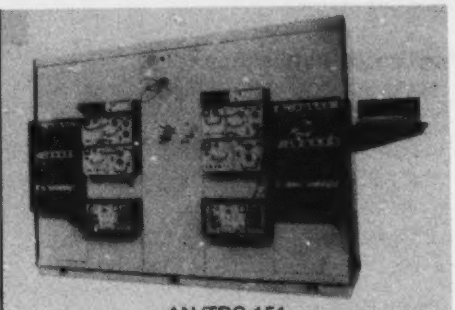
Training Requirements Supported:
MOSC 26Y

REACTIVE ELECTRONICS EQUIPMENT SIMULATOR (REES)

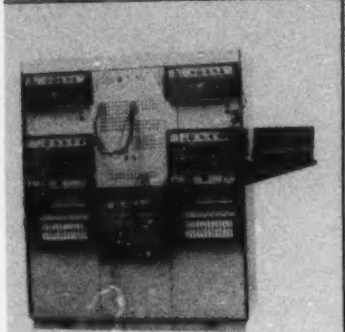
DVC 11-42 **NSN 6930-01-075-8378**



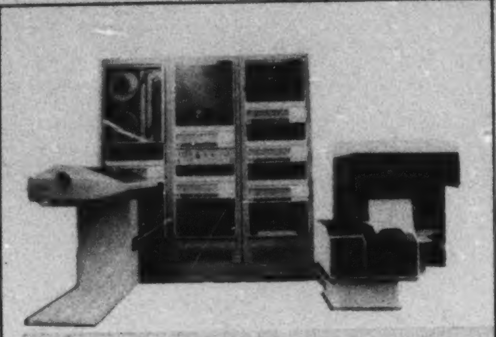
INSTRUCTOR STATION



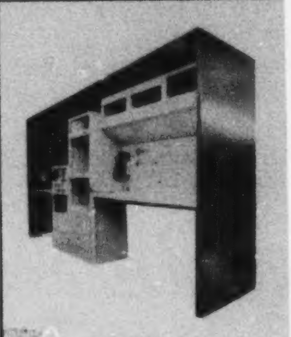
AN/TRC-151



AN/TCC-73



COMPUTER SYSTEM



AN/TSQ-84

Training Category/Level Utilized:

Signal/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To support training on the operational and organizational maintenance of communications systems. The specific training requirements supported are shown following the descriptive data.

Functional Description:

REES is a computer-controlled training device consisting of four signal nodes (32 training positions) plus an instructor console. Each signal node contains the following simulated equipment: one each AN/TSQ-84, one each AN/TSQ-85, one each AN/TRC-138, one each AN/TRC-145, one each AN/TRC-151, and three each AN/TCC-73. Each of the simulated assemblages can operate independently or as a part of an integrated tactical communications system. REES simulates the front panel configurations of the equipment contained in each assemblage. REES duplicates the functions of the actual equipment. REES is designed so that no possible combination of control settings, adjustments, alignments, interconnecting patch cords and cables will cause actual damage to the training device. Combinations that would cause damage to the actual equipment will cause the simulator to display a simulated malfunction condition, and additional changes in the operating conditions will be precluded until the malfunction is cleared.

Physical Information:

TRC-138: 104'' x 24'' x 62''; 1,000 lb
TSQ-85: 86'' x 29'' x 79''; 770 lb
TCC-73: 75'' x 26'' x 70''; 880 lb
TRC-145: 113'' x 26'' x 70''; 990 lb
TRC-151: 113'' x 26'' x 70''; 1,030 lb
TSQ-84: 141'' x 32'' x 80''; 550 lb (curbside wall)
141'' x 32'' x 80''; 450 lb (roadside wall)
Instructor station: 163'' x 62'' x 56''; 1,650 lb
Data General NOVA 3D:
NOVA 3/12: 68'' x 30'' x 71''; 2,750 lb

Card reader: 19'' x 14'' x 11''; 60 lb
Line printer: 33'' x 22'' x 51''; 340 lb
Keyboard printer terminal: 27'' x 21'' x 34''; 60 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Building, 600'' x 1,080'', Climatic control that maintains the ambient room temperature at 70° ±5° F and a relative humidity of 50 ±10 percent. MCA funding for building may be required.

Power Requirements:
110/220 vac, 3-phase, 60 cycle, 100 kva

Applicable Publications:
Commercial manuals

Reference Publications:
None

Training Requirements Supported:
MOSC 31M20

SM 113-31M Tasks

10311032

MOSC 31N20

SM 113-602 Tasks

0003
2004
2005
2007
2008
2009
2010
2011

MOSC 26Q10

SM 113-591 Tasks

0081
2014
2046
2051

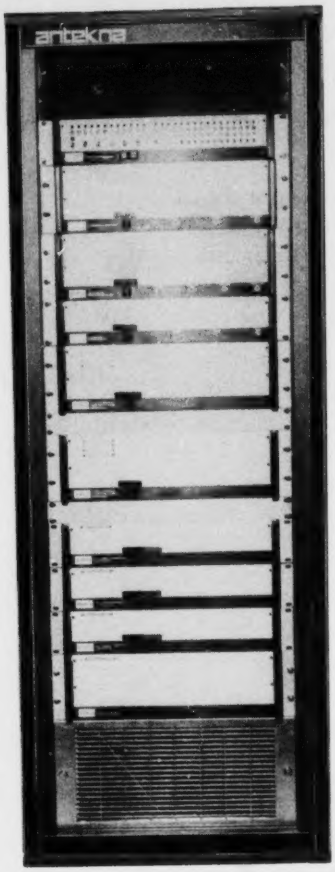
SM 113-593 Tasks

2012
4014

ANTENNA SIGNAL SIMULATOR

DVC 11-43

NSN 6930-01-075-8379



DVC NO. 11-43 ①

Training Category/Level Utilized:

Signal/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

This trainer provides a live signal environment to student intercept positions contained in the AN/MLQ-24 receiving set. The simulated environment creates a realistic mission profile for Electronic Warfare/Signal Intelligence Noncommunications Interceptor personnel. The specific training requirements supported are shown following the descriptive data.

Functional Description:

This is a digitally controlled, hard wired, radar simulator. Characteristic emissions include radio frequency (rf) (0.5 to 11 GHz), pulse repetition frequency (PRF), pulse duration (PD), scans, direction of arrival, and signal strength. It will simultaneously produce a total of 120 emitters with variety of 16 types. Signal data may be entered manually using a standard manual keyboard or automatically via magnetic tapes. Tape prepared scenarios may be programmed for periods of up to 20 hours. Recorded programs may be interrupted and changed at any time. The current installation interfaces and stimulates three Countermeasures Receiving Sets, AN/MLQ-24s, simultaneously. Separate direction of arrivals is programmed for realism of training. Equipment is contained in one standard rack plus a desk model keyboard/cassette/paper printout terminal.

DVC 11-43

Physical Information:

The main unit is housed in a 67'' x 19'' standard equipment rack. The cassette programmer unit is desk mounted.

Equipment Required, Not Supplied:

Three AN/MLQ-24 receiving sets

Special Installation Requirements:

72'' x 72'' room that is soundproofed and environmentally controlled

Power Requirements:

110 vac, 60 cycle

Applicable Publications:

Manufacturer's operator and maintenance publications.

Reference Publications:

TM 32-5895-215

Training Requirements Supported:

MOSC 98J10

SM 867-798 Tasks

1201
1202
1203
1204
1208

MOSC 98J20

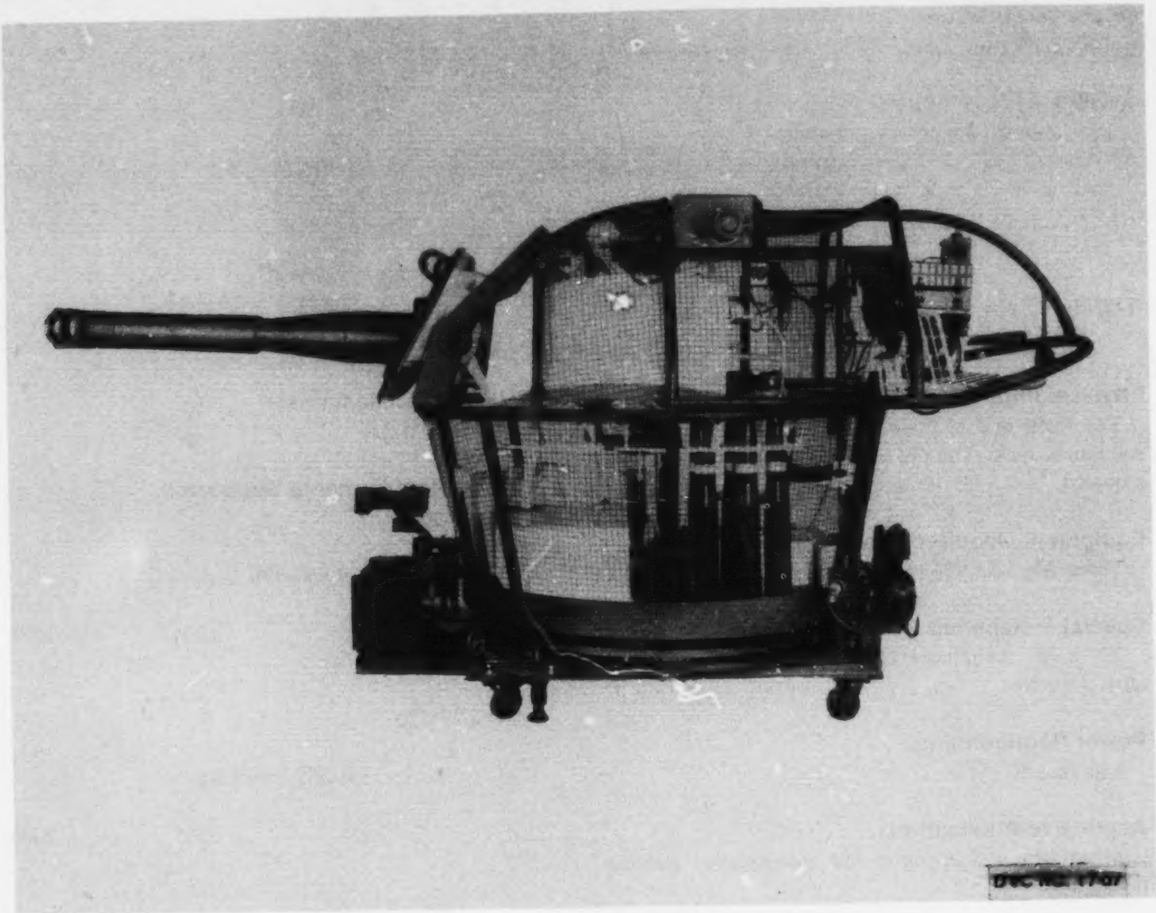
SM 867-798 Tasks

2201
2203
2304
2305
2403

M48 TANK TURRET FAMILIARIZATION AND COMMUNICATIONS TRAINER

DVC 17-07
3T48

NSN 6920-01-067-1663



Training Category/Level Utilized:

Armor/Level 2

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To provide a suitable environment for support of basic and advanced training of tank crewmen in: (1) coordinated tank operations, gunnery, and communications, (2) specific duties of individual crew members, and (3) maintaining efficiency. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is a skeletonized version of a full-scale M48 Tank Turret. The turret rotates 360° on an open framework base. The following equipment is installed: (1) a synthetic 90mm gun (M41) with an operable breech capable of assembly, loading, and unloading; (2) a combination mount (T148); (3) a stereorangefinder, periscope, telescope, and communications equipment; (4) turret and fire control equipment; (5) master and auxiliary firing switches; and (6) seats for all crew members.

Physical Information:

84'' x 102'' x 204''; 5,000 lb

Equipment Required, Not Supplied:

24 vdc Power Supply

DVC 17-07

Special Installation Requirements:

None

Power Requirements:

110 vac for power supply, 24 vdc for trainer.

Applicable Publications:

NAVEXOS P-1400, Operating and Maintenance Guide for M48 Tank Familiarization and Communications trainer

Reference Publications:

TB9-7012-8

Training Requirements Supported:

17-19E1/2, FM 17-19F1/2, and FM 17-19E3

SM 171-123 Tasks

1202
1203

SM 171-124 Tasks

2051
2052
2055

SM 171-127 Tasks

1007
1009
1010
1011
1013
1014
1015
1016
1018
1233
2056
2057
2058
2059

SM 171-132 Tasks

1201
1202
1203
1204

SM 171-139 Tasks

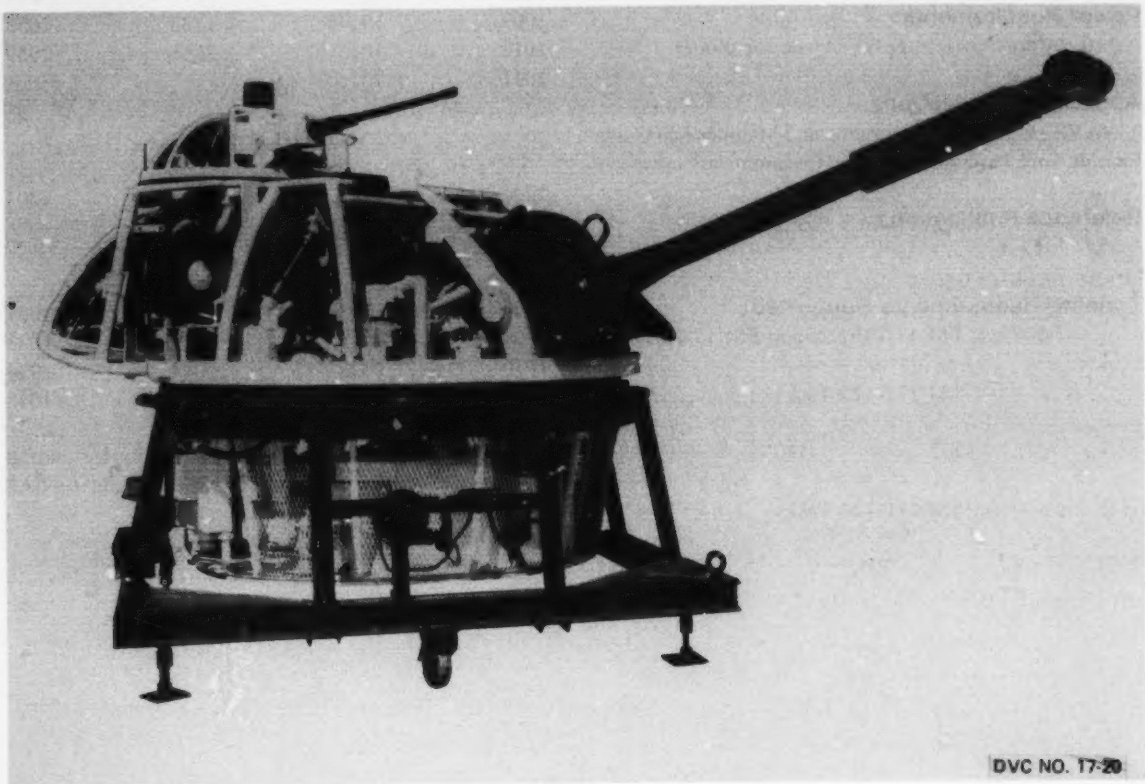
1007
1009
1010
1012
1018
1019
1023
1024
1026
1027
1029
1030
1031
1033
1034
1040

Note: Tasks that can be trained on the device can be translated to the M48A5, M60A1, and M60A3 Tank Turrets.

M48A1 TANK TURRET TRAINER

DVC 17-20
3A78

NSN 6920-01-067-1664



Training Category/Level Utilized:
Armor/Level 2

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

To train tank crewmen in an environment similar to that of operational equipment, with full consideration given to training basic and advanced tank crewmen from initial introduction to the simulated M48A1 turret through subcaliber firing exercises on the coaxial machinegun. The device offers basic and advanced training in: (1) mounted action drill; (2) operation of the cupola, turret, and combination gun mount; (3) service of the piece; (4) conduct of fire for dry firing of the main armament; (5) live machinegun firing exercises; (6) radio and interphone communication procedures; and (7) installation and maintenance of the AN/GRC series tank radio. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer is self-contained and simulates the operation and functions of the M48A1 Tank Turret. Functional equipment and controls are located in their correct relative position. Armament and turret furnishings are provided consistent with the training purposes and skeletonized construction of the trainer. The trainer consists of a turret shell mounted on a supporting base. Provisions for a combination of operational and mockup armament are made, as well as for an operational communication system. The turret may be traversed 360° in either direction, by electrical power or manually. The main armament and mount can be elevated and depressed from operator controls.

DVC 17-20

Physical Information:

228" x 108" x 138"; 10,000 lb

Equipment Required, Not Supplied:

One .30 caliber machinegun

One .50 caliber machinegun, cupola-mounted

Three handsets (or chestsets) and headsets for use with Radio Set AN/GRC-4

Special Installation Requirements:

Classroom 312" x 312" x 204"

Power Requirements:

220 vac, 20 A, 3-phase, 4-wire, 60 cycle

Applicable Publications:

NAVEXOS P-2035, Operation and Maintenance Guide with Parts Catalog for Trainer, Tank Turret, M48A1, Device 3A78

Reference Publications:

TB 9-7012-8

Training Requirements Supported:

17-19E1/2, FM 17-19F1/2, and FM 17-19E3

SM 171-123 Tasks

1202
1203

SM 171-124 Tasks

2051
2052
2055

SM 171-127 Tasks

1007
1009
1010
1011
1013
1014
1015
1016
1018
1233
2056
2057
2058
2059

SM 171-132 Tasks

1201
1202
1203
1204

SM 171-139 Tasks

1007
1009
1010
1012
1018
1019
1023
1024
1026
1027
1029
1030
1031
1033
1034
1040

Note: Certain tasks that can be trained on the device can be translated to the M48A5, M60A1, and M60A3 Tank Turrets.

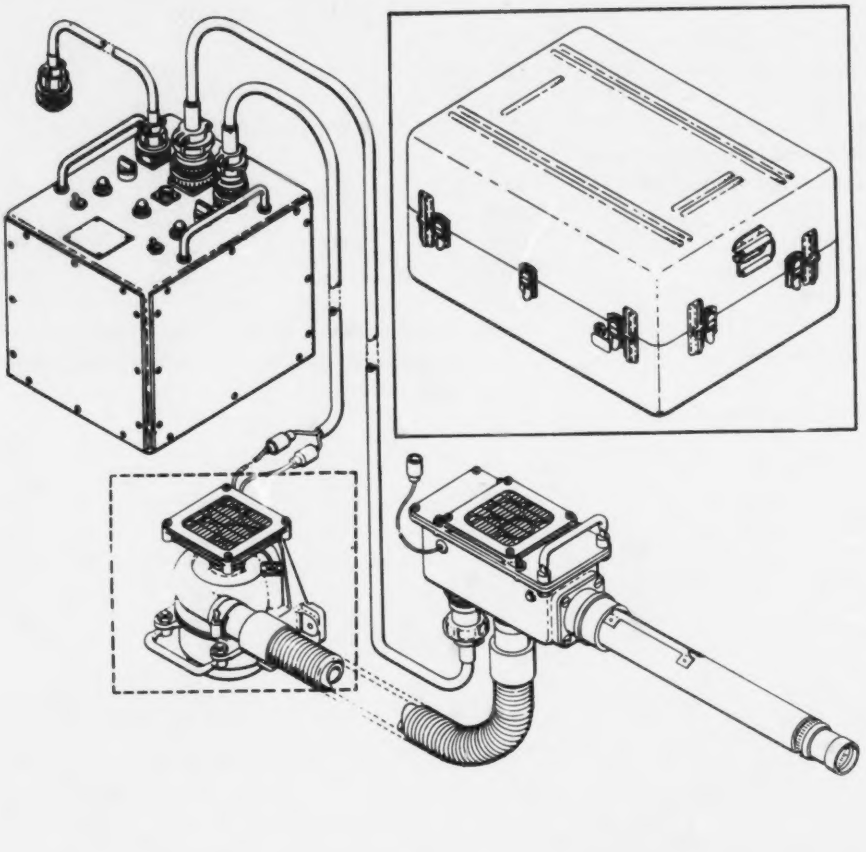
LASER GUN FIRING TRAINER

DVC 17-33
3A102

DVC 17-33A
3A102A

NSN 6920-01-067-1682

NSN 6920-01-067-1683



DVC NO. 17-33

Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For use on the target range to train crewmen of M48 Series Tanks, M60 Series Tanks (including the M60A1E1 Tank) and the M551 Armored Reconnaissance/Airborne Assault Vehicle in gunnery procedures. Specifically, to train crewmen on the proper techniques of:

a. Laying sights on a target
b. Tracking a target
c. Firing the gun

DVC 17-33

d. Visually adjusting the lay of the weapon on a target

Note: Early production model designation 3A102A.

This device has been replaced by DVC 17-56.

Functional Description:

The device consists of the following: (1) a laser-type simulator, (2) a power supply, (3) a blower assembly, (4) a blower hose assembly, (5) targets, (6) required interconnecting cables, and (7) a carrying case.

The simulator is installed in the vehicles M73 machine gun mount. Each time the main weapon firing circuit in the vehicle is activated, the simulator provides a single, bright burst of intense red light, visible through vehicle optics as a momentary red spot on the target. This enables the crewman to accurately determine how well he is laying his gun sights and tracking the target. In addition, a supervising scorer can observe how accurately and proficiently the crewman is operating the vehicles main weapon system.

The simulator optics can be focused to adjust for a spot ½ inch in diameter at a range of 200 feet. A scribe mark is engraved on the focusing mechanism and a knurled locking ring retains the focus after it is set for 200 feet. However, after installation the vehicle optics must be boresighted to the laser beam before the simulator can be used. Each simulator contains an integral boresight for this purpose.

The power supply, which is mounted on the vehicle floor during operation, provides the power necessary for the simulator, with an input of 24 vdc from the vehicle electrical system.

An intake blower with ducting provides cooling for the laser simulator.

In addition, to the above components, three types of targets are provided:

a. A zeroing silhouette target with five circles, 4'' in diameter, with crosslines in each circle.

b. An initial lay target with five bull's eyes consisting of concentric circles, 4'' and 8'' in diameter.

c. A moving target with 15 identical geometric patterns 6'' high and 8'' wide, separated by 12'' on either side, and 7'' top and bottom. A number, 2'' high, is inscribed in the center of each pattern.

The moving target is not provided with a means for moving it, but must be mounted on a device which provides the motion.

Physical Information:

38'' x 29'' x 18''; 113 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Vehicle's M73 Machinegun Mount while on the target range.

Power Requirements:

24 vdc, maximum load 1000 W, input from the vehicle's electrical system

Applicable Publications:

NAVSO P-3102 (U), Maintenance Handbook with Parts List for Device 3A102B

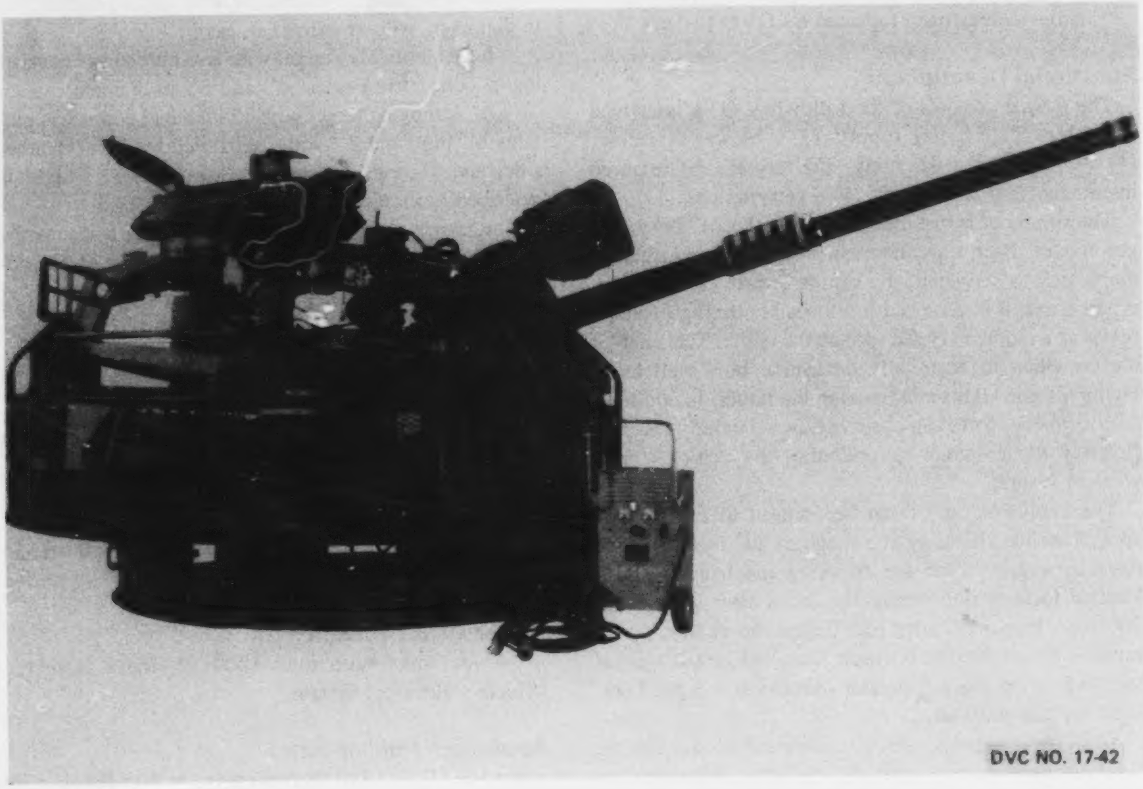
Reference Publications:

FM 17-12

TRAINER, TANK GUNNERY: 105MM

DVC 17-42
M30

NSN 6920-00-790-2259


DVC NO. 17-42

Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use to familiarize personnel with operation and maintenance of the M60 Tank Turret. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The M30 Tank Gunnery Trainer is used to train personnel in the operation and maintenance of the M60 Tank Turret, 105mm Gun, .50 Caliber Machinegun, 7.62mm Machinegun coaxially mounted, and associated sighting and fire-control equipment. The trainer is fully equipped with M60 Turret components, including on-equipment material. Casters provide for trainer mobility in classroom area. Cutouts in the turret wall are to allow instructors to observe trainees and students to observe operations from the platforms.

Electric power for turret operation is furnished by a rectifier powerpack, which replaces the conventional tank electrical power source. Hydraulic power for raising the trainer is provided by three manually-operated pumps mounted on the stand assembly.

Physical Information:
Overall length: 320"
Overall width: 159"
Raised height: 118"
Approximate weight: 36,000 lb

DVC 17-42

Equipment Required, Not Supplied:
Gas particulate filter unit with hoses

Special Installation Requirements:
None

Power Requirements:
Rectifier 230/460 V, 3-phase, 50/60 cycle, output voltage 25-31 vdc with maximum continuous current of 400 A and maximum intermittent current for 3 minutes of 800 A.

Applicable Publications:
None

Reference Publications:
TM 9-2350-215 Series
TM 9-1000-213 Series

Training Requirements Supported:
FM 17-19E1/2, FM 17-19F1/2, and FM 17-19E3

SM 171-123 Tasks

1202
1203

SM 171-124 Tasks

2051
2052
2055

SM 171-127 Tasks

1007
1009
1010
1011
1013
1014
1015
1016
1018
1233
2056
2057
2058
2059

SM 171-132 Tasks

1201
1202
1203
1204

SM 171-139

1007
1009
1010
1012
1018
1019
1023
1024
1026
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1031
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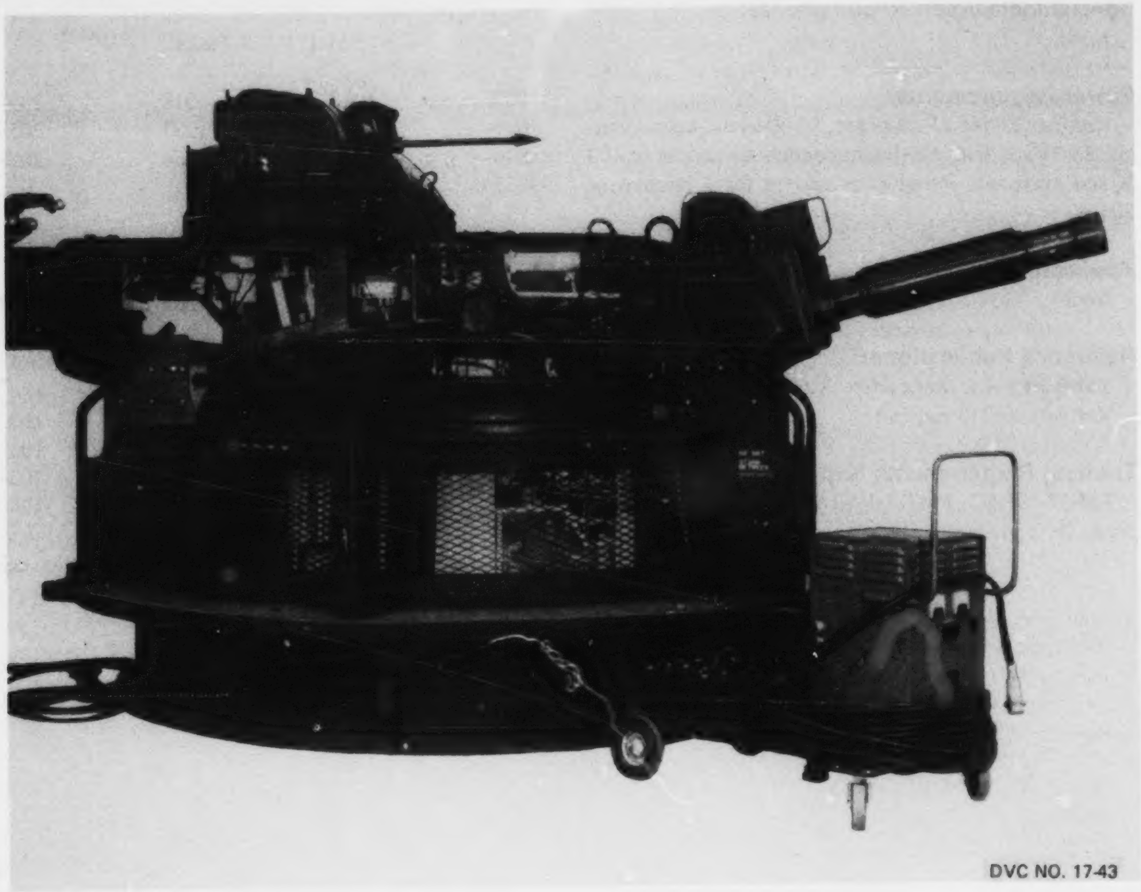
1034
1040

Note: Certain tasks that can be trained on this device can be translated to the M48A5, M60A1, and M60A3 Tank Turrets.

TRAINER, TANK GUNNERY: 152MM

DVC 17-43
M37

NSN 6920-00-999-7792



DVC NO. 17-43

Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use to familiarize personnel with operation and maintenance procedures of the turret for the tactical M60A2 Tank. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The M37 Tank Gunnery Trainer is used to train personnel in the operation and maintenance of the M60A2 Tank Turret, 152mm Gun, Coaxial 7.62 Machinegun, .50 Caliber Machinegun, and associated sighting and fire control equipment. The trainer is fully equipped with M60A2 turret components, including on-equipment materiel. Casters provide for trainer mobility in classroom area. Cutouts in the turret walls allow the instructors to observe trainees from two platforms. Electric power for turret operation is furnished by a rectifier power pack, which replaces the conventional tank electrical power source. Hydraulic power for raising the trainer is provided by three manually-operated pumps mounted on the trainer stand assembly.

DVC 17-43

The combination gun mount assembly has been modified to accommodate the main gun recoil simulator. Simulated firing is accomplished using either the gunner's or commander's controls to initiate a firing pulse to a switch actuating a relay and a solenoid valve. Pressurized oil is released by the solenoid valve from the buffer assembly to move the gun 6½ inches in recoil, and compress the recoil spring. Another switch is actuated by the recoiling breech. The solenoid valve released pressurized oil to recharge the buffer, and the recoil spring returns the gun to battery position.

Physical Information:

240" x 156" x 144"; 41,000 lb
Traverse circle diameter: 252"

Equipment Required, Not Supplied:

Torque handle assembly (Part No. 11654999, NSN 5120-00-187-4951) used to adjust ammunition storage racks.

Special Installation Requirements:

None

Power Requirements:

Rectifier powerpack with input power of 230/460 volts, 3-phase, 50/60 cycle, output voltage of 24/28 vdc, maximum continuous current 400 A, maximum intermittent current for 3 minutes 800 A.

Applicable Publications:

None

Reference Publications:

TM 9-2350-232 Series
TM 9-2300-378 Series
LO 9-2350-232 Series

Training Requirements Supported:

FM 17-19J1/2, FM 17-19J3, and FM 17-19F1/2

SM 171-123 Tasks

1352

SM 171-124 Tasks

1351
1352
1354

SM 171-127 Tasks

1009
1011
1014
1015
1371
1372
1374
1375
1376
1377
1378
1379
1380
1381
1382
1383
1384
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1386
1389
1392
1393
1395
1397

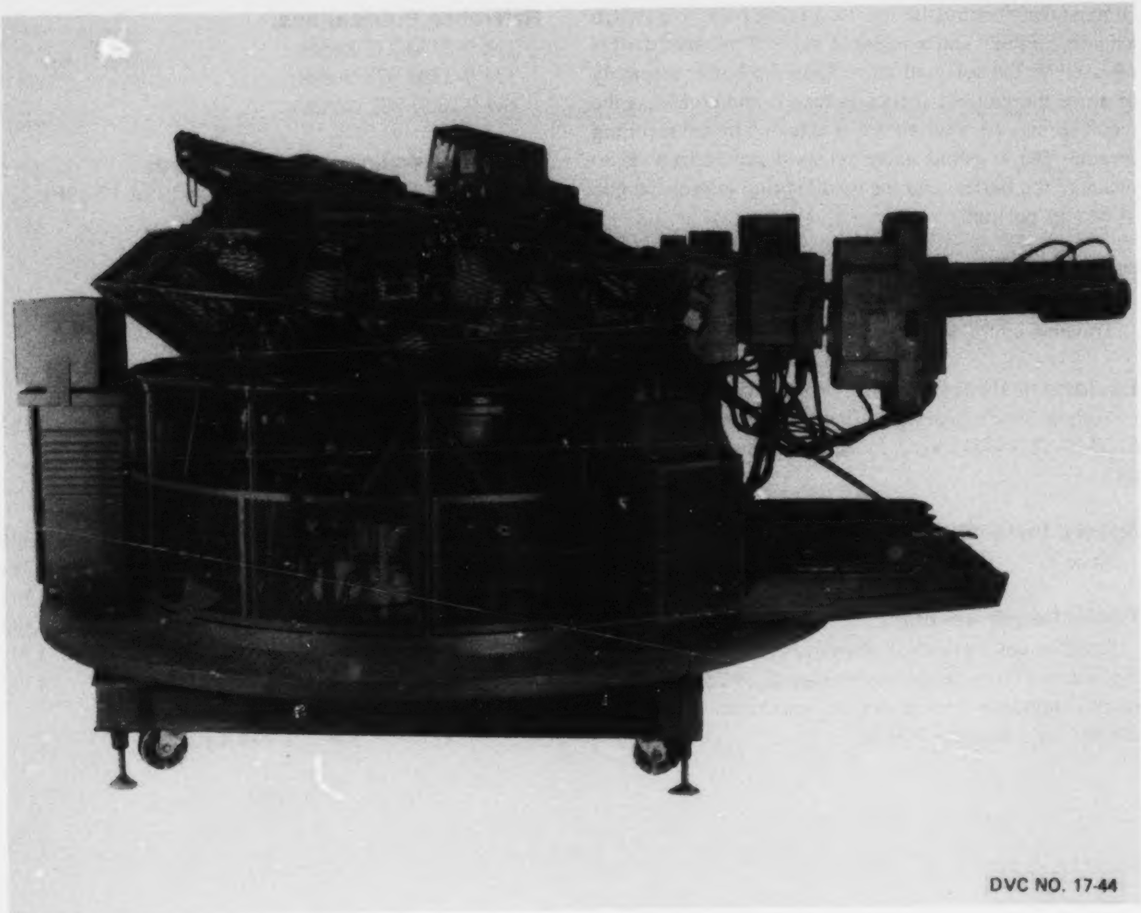
SM 171-139 Task

1009

TRAINER, ARMORED VEHICLE TURRET: SHERIDAN WEAPON SYSTEM

DVC 17-44
XM40

NSN 6920-00-912-3999



DVC NO. 17-44

Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to familiarize personnel with procedures used in turret operations for the Armored Reconnaissance/Airborne Assault Vehicle, M551.

Functional Description:
The interior of the trainer is equivalent to the operational turret in equipment configuration and dimension. The support base and bearing assembly consists of a tubular upright, attaching rotating turret assembly, and components driven manually or electrically to traverse 360°. The trainer rests on four leveling jacks. The turret assembly consists of the turret housing frame, comparable in shape to an operational turret. Cutouts in the turret wall are covered with open mesh to permit students to observe operations. The instructor's control unit is mounted on the housing frame and contains control indicators required for student performance monitoring and evaluation. The turret gun drive group is an electric drive

control system. The visual presentation simulates the trainer tactical problem by delivering to the gunner's telescope a motion picture film image of target and terrain upon which a controlled light spot, resembling a missile in flight, is superimposed. The visual simulator unit consists of a projector with mission film, an X-Y-drive assembly which shifts lens to simulate target positioning, and a television camera which transmits the telescope image via coaxial cable to a TM monitor to display information to the instructor. The projectile-lowering mechanism lowers expended dummy rounds or missiles to a collector, which then transports them to a temporary stacking space. The hydraulic unit is used for gun recoil, the operation of lowering arm actuating cylinder, and the motorchain driven mechanism for transporting the projectile through the gun tube.

Physical Information:

192'' x 108'' x 144''; 8,300 lb

Nine headsets AM-1780/VRC are provided.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

220 vac, 50 A per phase, 3-phase, 4-wire, 60 cycle

Applicable Publications:

TM 9-6920-351-24P

Reference Publications:

TM 9-2350-230 Series

Training Requirements Supported:

FM 17-19G1/2 and FM 17-19H1/2

SM 171-124 Tasks

1751
1752

SM 171-127 Tasks

1009
1010
1011
1012
1014
1015
1752
1753
1754
1755
1756
1757
1758
1759
1762
1763
1764
1776
1777
1778
1781
1789

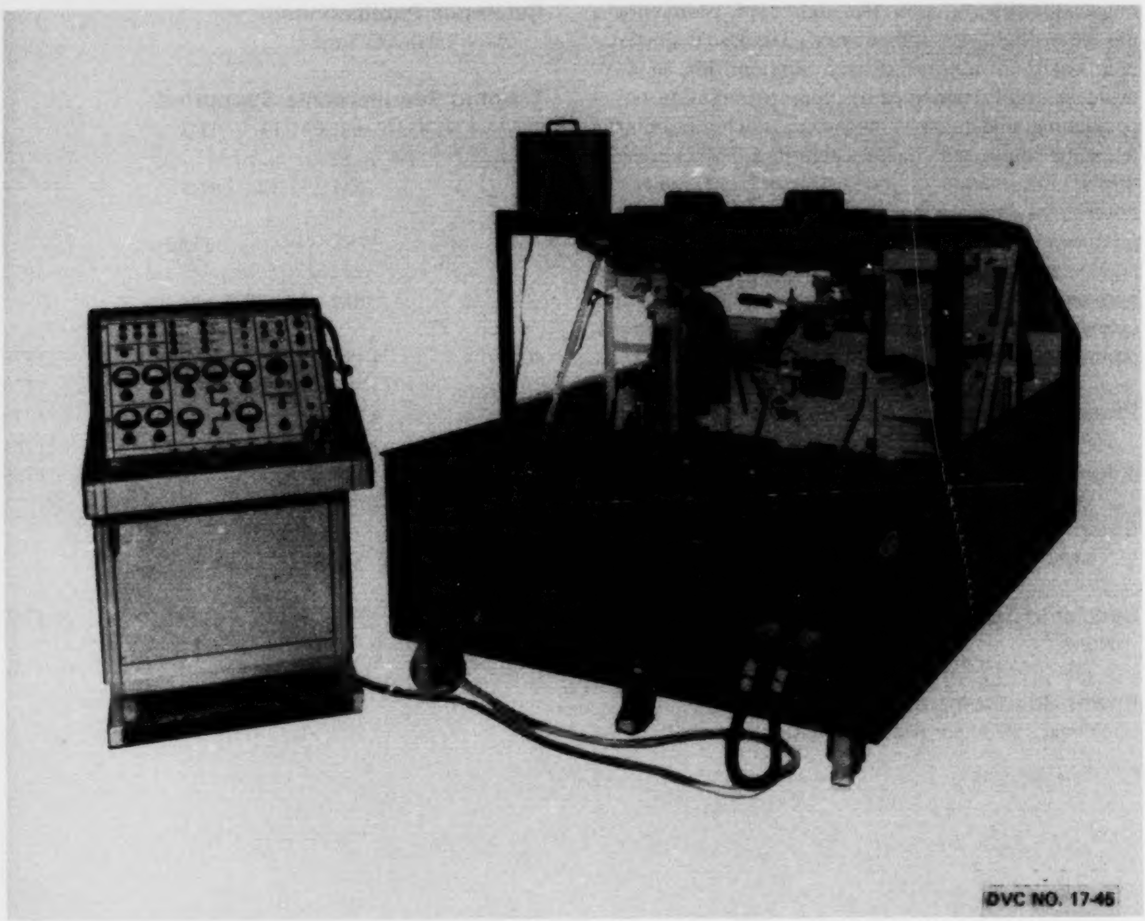
SM 171-132 Tasks

1751
1752
1753
1758

TRAINER, TRACKED VEHICLE DRIVING: FOR M60 SERIES TANK

DVC 17-45
M34

NSN 6920-00-779-0893



DVC NO. 17-45

Training Category/Level Utilized:
Armor/Level 2

Logistic Responsible Command, Service, or Agency:
TACOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use to provide an economical and efficient environment for training tank crewmen in driving and operation of the M60A1 Tank. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The M34 Tracked Vehicle Driving Trainer for the M60A1 Tank consists of a simulated driver's compartment and an instructor's console. The trainer is a mockup of the driver's compartment with open construction to facilitate observation of the driver's activities by the instructor and other trainees. The instructor guides the trainee's orientation and performs the duties of a tank commander issuing instructions to his driver.

Instrumentation and controls are identical to those found in the M60A1 Tank. The trainer is mounted on casters with steadying jacks to keep it from rolling. The same pressures required in the M60A1 for application of brake pedal, steering, and control shifting are installed in the device. Directly behind the driver seat is an enclosure which houses the speaker and sound system. The sound system is connected to the instructor's console by means of an electrical conduit. The trainer simulates starting, acceleration, shifting, turning, and hill climbing.

The instructor's console duplicates the driver's console. The instructor may communicate with the driver trainee, the attendant student class, or both. In addition, the instructor can override the driver's trainee's control to simulate any condition to test the driver trainee's reactions.

Physical Information:
96" x 60" x 60"; 1,830 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

Applicable Publications:
TM 9-6930-200-14

Reference Publications:
TM 9-2350-215-10

Training Requirements Supported:
FM 17-19F1/2

SM 171-127 Task

1007

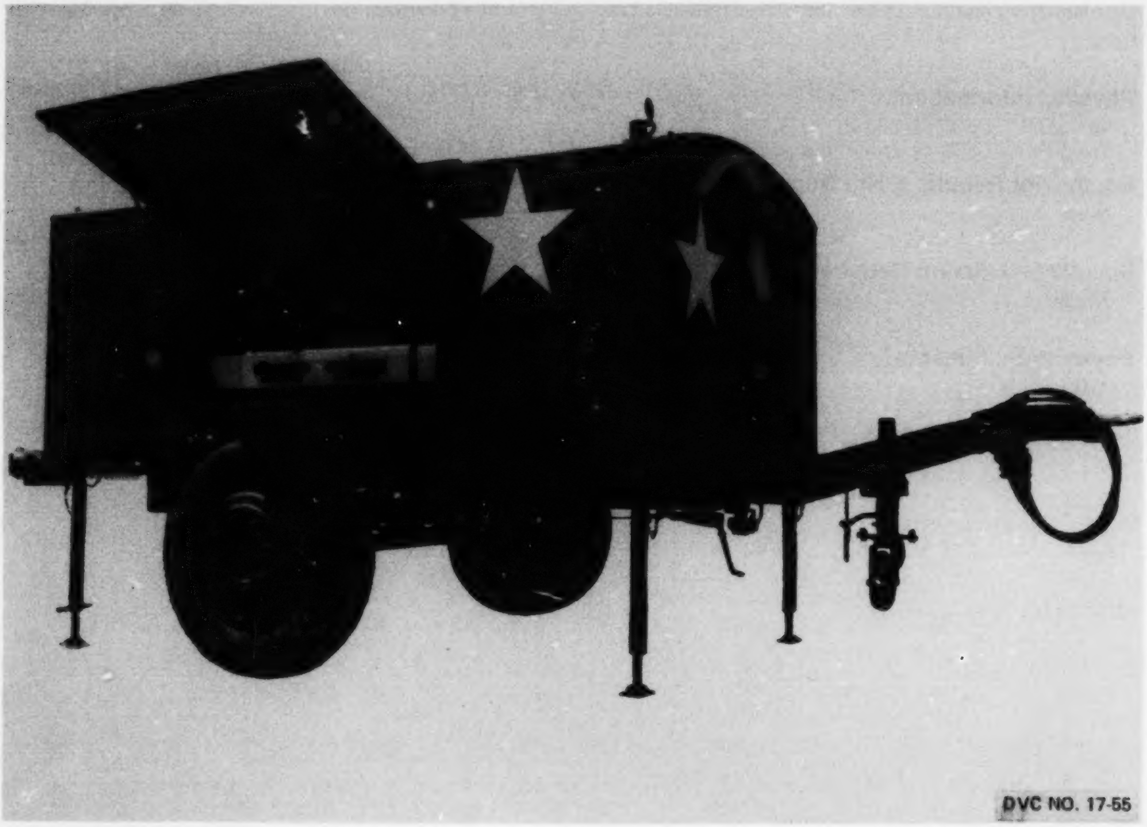
SM 171-139 Tasks

1005 1006 1043

Note: Certain tasks that can be trained on this device can be translated to the M48A5 Tank.

TARGET TOWING MECHANISM, TRAILER MOUNTED: LIGHT W/E, AND MEDIUM W/E

DVC 17-55A **M93**	**NSN 6920-00-226-6287**
DVC 17-55B **M94**	**NSN 6920-00-226-6288**



Training Category/Level Utilized:

Armor/Level 2

Logistic Responsible Command, Service, or Agency:

AMCCOM

Source and Method of Obtaining:

Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:

For use in the field for troop training purposes by simulating any combat situation or tank movement: frontal or flank attacks and retrograde movements by dummy tanks or other representative target vehicles across the terrain at different speeds and in different directions. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The towing mechanism consists of a special type trailer with a ''built-in'' towing group composed mainly of two large-capacity cable drums driven by an industrial gasoline engine. The device is suitable for cross-country towing. It can be towed to the site of operation by a truck or for short distances by a jeep.

The instrument control panel is centrally located to facilitate checking the operation of the plant, and a good all-around view of the terrain is allowed so that movement of targets can be readily observed.

DVC 17-55

Target movement can be effected at infinitely variable speed between 0 and 25 miles per hour. With suitable arrangement of targets, by altering their direction, by utilizing given possibilities of cover, by moving targets at different speeds, stopping in depressions, and passing through open areas at full speed, a realistic combat picture can be developed, particularly when several towing units are used.

Physical Information:

Model M93:
102'' x 52'' x 78''
Lenght of cable on each drum: 50,000'
Weight of the trailer: 1,980 lb
Model M94:
120'' x 68'' x 84''
Length of cable on each drum: 10,000'
Weight of the trailer: 3,300 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-6920-222-15
TM 9-6920-223-15

Reference Publications:

None

Training Requirements Supported:

FM 17-19D1/2, FM 17-19E1/2, FM 17-19E3, FM 17-19F1/2, FM 17-19G1/2, FM 17-19H1/2, and FM 17-19J1/2.

SM 171-121 Tasks

1008

SM 171-123 Tasks

1204
1354
1504

SM 171-124 Tasks

1354
1754
2055

SM 171-127 Tasks

1009
1010
1011
1012
1013
1389
1392
1397
1539
1544
1549
1552
1554
1555
1781

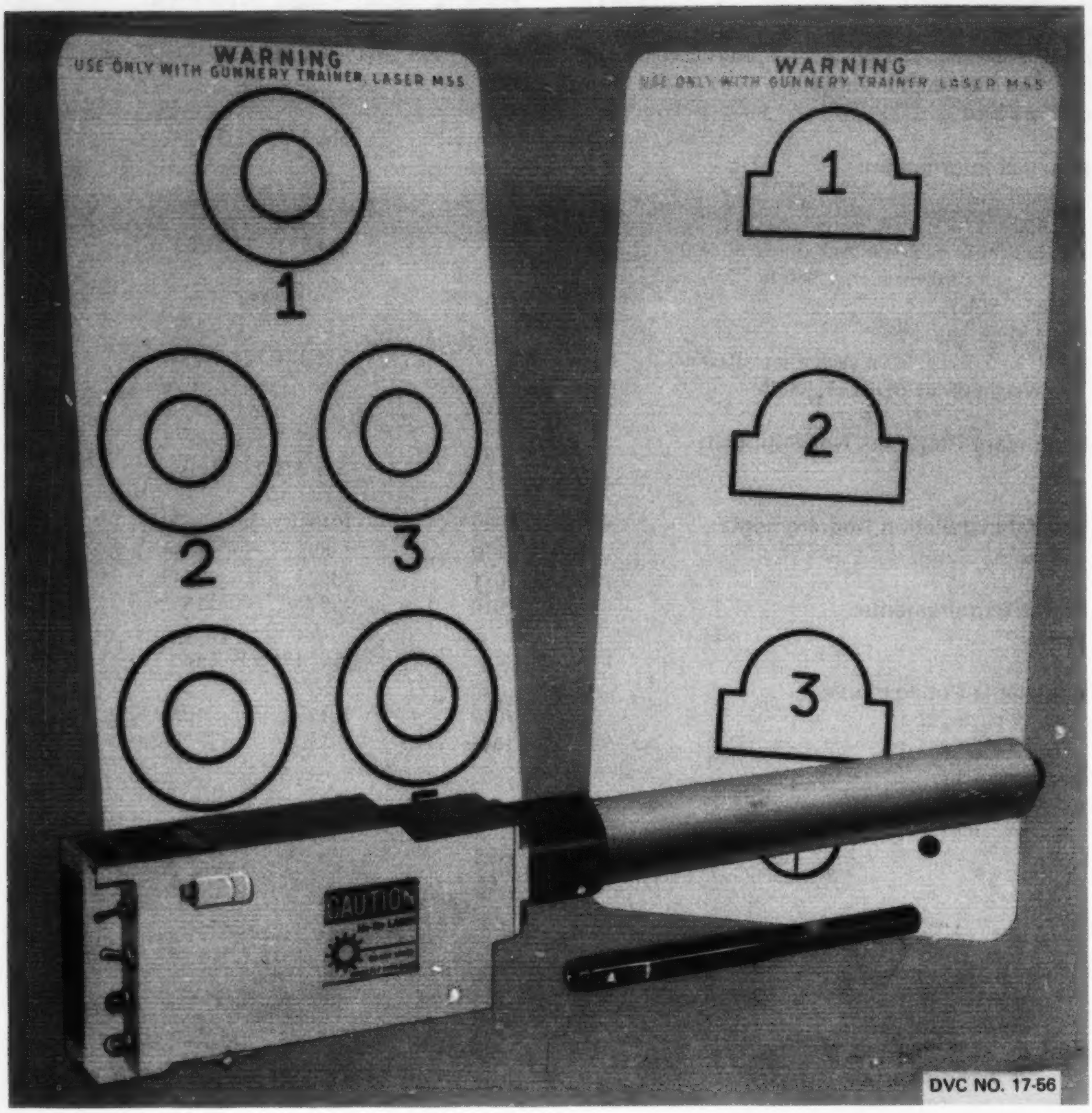
SM 171-139 Tasks

1009
1016
1017
1036
1038

LASER TANK GUNNERY TRAINER

DVC 17-56
M55

NSN 6920-00-689-4036


WARNING
USE ONLY WITH GUNNERY TRAINER, LASER M55
1
2
3
WARNING
USE ONLY WITH GUNNERY TRAINER, LASER M55
1
2
3
CAUTION

DVC NO. 17-56

Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For use on the target range to train crewmen of M48 Series Tanks, M60 Series Tanks, and the M551 Armored

DVC 17-56

Reconnaissance/Airborne Assault Vehicle in gunnery procedures. Specifically, to train crewmen on the proper techniques of:

a. Laying sights on a target
b. Tracking a target
c. Firing the gun
d. Visually adjusting the lay of the weapon on a target

Functional Description:

The device consists of the following: (1) barrel extension, (2) trainer, laser gunnery, (3) TM 9-6920-357-10, and (4) carrying case.

The trainer is installed in the vehicle's M73/M219 machinegun mount. Each time the main weapon firing circuit in the vehicle is activated, the simulator provides a single, bright burst of intense red light, visible through vehicle optics as a momentary red spot on the target. This enables the crewman to accurately determine how well he is laying his gunsights and tracking the target. In addition, a supervising scorer can observe how accurately and proficiently the crewman is operating the vehicle's main weapon system.

The simulator optics can be focused to adjust for a spot 5/8" in diameter at a range of 200 feet. After installation, the vehicle optics must be boresighted to the laser beam before the simulator can be used. The laser trainer is operated from vehicle power.

In addition to the above components three types of targets are provided:

a. A zeroing silhouette target with five circles 4 inches in diameter with crosslines in each circle.

b. An initial lay target with five bull's eyes consisting of concentric circles 4 inches and 8 inches in diameter.

c. A moving target with 15 identical geometric patterns 6 inches high and 8 inches wide, separated by 12 inches on either side and 7 inches top and bottom. A number 2 inches high is inscribed in the center of each pattern. The moving target is not provided with a means for moving it, but must be mounted on a device which provides the motion.

d. Special retroreflective targets are required and lead must be introduced into the gunner's sights to engage moving targets.

e. When mounted in the coaxial position, parrallax affects accuracy and targets must be emplaced at the range at which the M55 was zeroed.

f. When used with a Brewster device, parrallax is reduced.

Physical Information:

12" x 9" x 35"; 36 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

24 vdc

Applicable Publications:

TM 9-6920-357-10

Reference Publications:

FM 17-12

Training Requirements Supported:

FM 17-19E1/2, FM 17-19E3, FM 17-19F1/2, FM 17-19G1/2, FM 17-19J1/2, and FM 17-19J3.

SM 171-127 Tasks

1009
1010
1011
1012
1013
1014
1389
1395
1397
1544
1552
1554
1555
1781

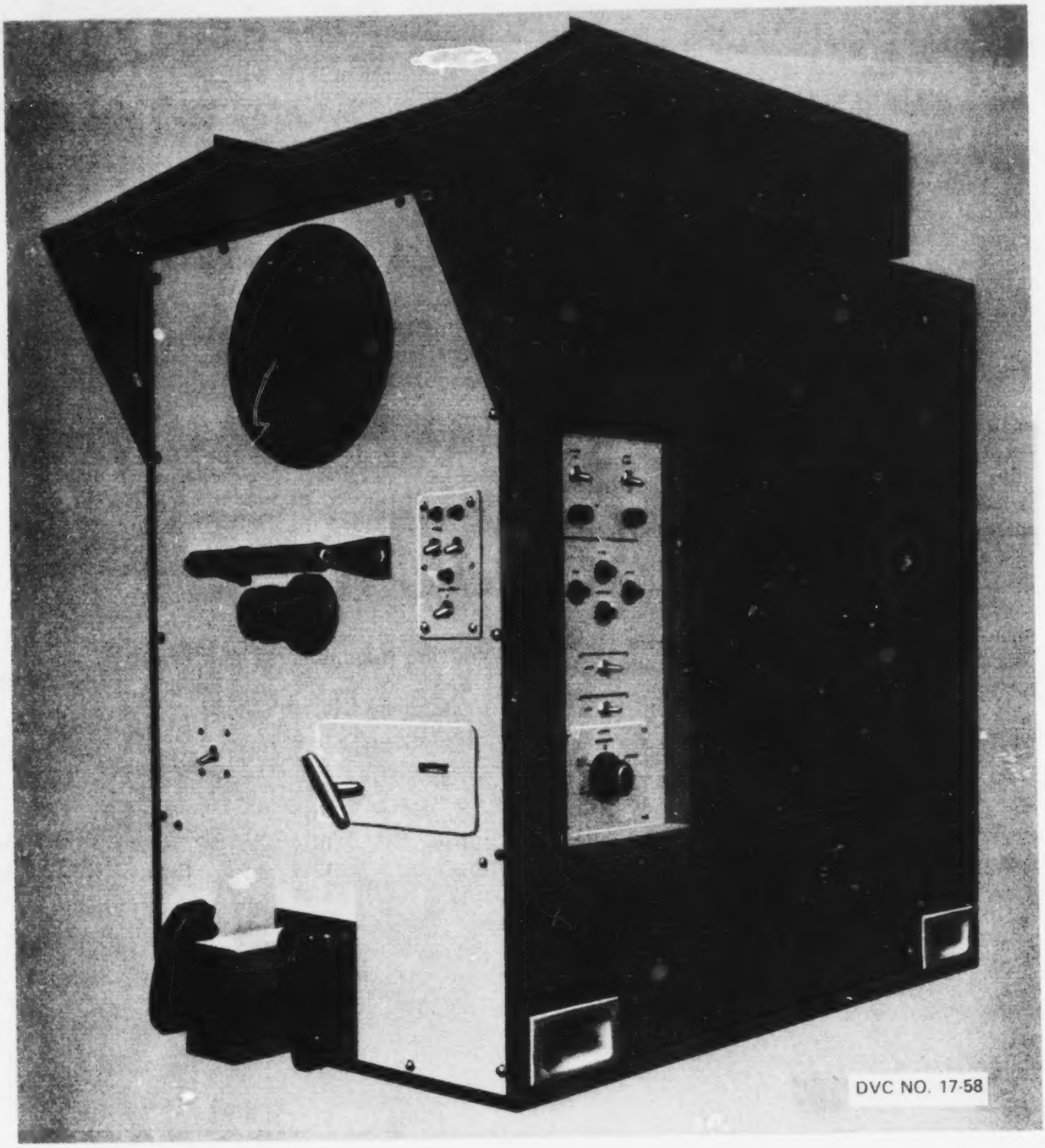
SM 171-139 Task

1017

BURST-ON-TARGET TANK GUNNERY TRAINER

DVC 17-58
17B4

NSN 6920-01-067-1666



Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The table-mounted trainer is used in a classroom to supplement training of tank crew gunners by teaching the

burst-on-target method of tank gunnery adjustment. It improves the ability of tank gunners to make correct burst or trace sensing, and to make proper adjustments in aiming to achieve a precise hit with a second round. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer utilizes simulated tank turret controls and a gunner's sight for student operation. It provides a target and reticle which move with respect to each other when the controls are actuated. The targets are various 35mm color slide transparencies taken of an enemy tank or vehicle and projected into the sight picture by a standard carousel projector mounted within the trainer. When the student is on target and the firing trigger is depressed, a flash of laser light simulates the round burst. The instructor is able to view the student's scene on a separate screen and has independent control of the burst position to simulate various elements of trajectory variation. Up to 80 different target scenes can be shown. The trainer is commercially manufactured and is self-contained.

Physical Information:

32'' x 15'' x 32''; 53 lb

Equipment Required, Not Supplied:

35mm color transparency slides of various target scenes

Special Installation Requirements:

None

Power Requirements:

110 vac, 60 cycle

Applicable Publications:

NAVTRADEV P-3962, Operation and Maintenance Guide with Parts List for Burst-On-Target Trainer, Device 17B4

Reference Publications:

FM 17-12

Training Requirements Supported:

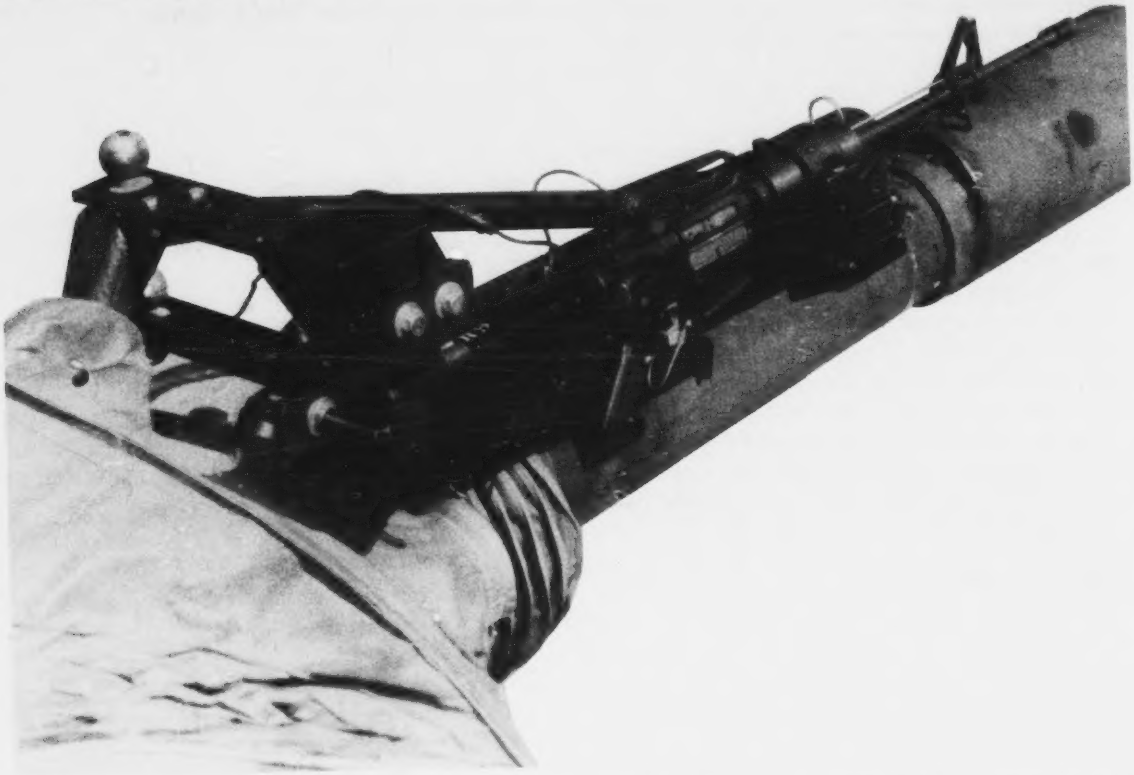
FM 17-19E1/2, FM 17-19F1/2, FM 17-19G1/2, FM 17-19H1/2, and FM 17-19J1/2

SM 171-127 Tasks

1009 1010

MOUNT, SUBCALIBER 5.56MM (BREWSTER DEVICE)

DVC 17-59/1 M180(M48/60 Series Tank) **NSN 6920-01-117-8692**
DVC 17-59/2 M181(M551 AR/AAV) **NSN Pending**



Training Category/Level Utilized:

Armor/Level 1

Logistic Responsible Command, Service, or Agency:

AMCCOM

Source and Method of Obtaining:

Available through local TASCs.

Purpose of Trainer:

This is a mounting device which permits use of the M16 Rifle or M55 Laser for subcaliber firing at reduced range. This provides a savings in main gun ammunition and allows firing to be done where space is at a premium. It is used in conjunction with the Scaled Range Target System. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The device consists of the following:

(1) Universal Mounting Plate Assembly; (2) solenoid, (3) Wiring Harness; (4) Front Mount Subassembly to the Universal mounting plate assembly which allows the mounting of the M16A1 Rifle and the M55 Laser Gunnery Trainer; (5) System Specific Brackets—17-59/1 (M180) for the M48A5; M60, M60A1, M60A3 tanks and 17-59/2 (M181) for the M551ARAAV to mount the device on these systems.

Physical Information:

M60/48 Series: 32'' x 21'' x 10''
M60A2: 32'' x 10'' x 8''
M551: 32'' x 6'' x 8''

Equipment Required, Not Supplied:

M55 Laser (DVC 17-56) or M16A1 Rifle with Rimfire Adapter (DVC 07-55)

Special Installation Requirements:

None

Power Requirements:

24 vdc vehicle voltage

DVC 17-59/1

Applicable Publications:
TM 9-6920-441-12 & P

Reference Publications:
FM 17-12 with supplements

Training Requirements Supported:

MOSC 19E, 19G, and 19J

SM 171-121 Task

1008

SM 171-127 Tasks

1009
1010
1011
1012
1013
1395
1397
1510
1511
1515
1555
1755
1759
1781

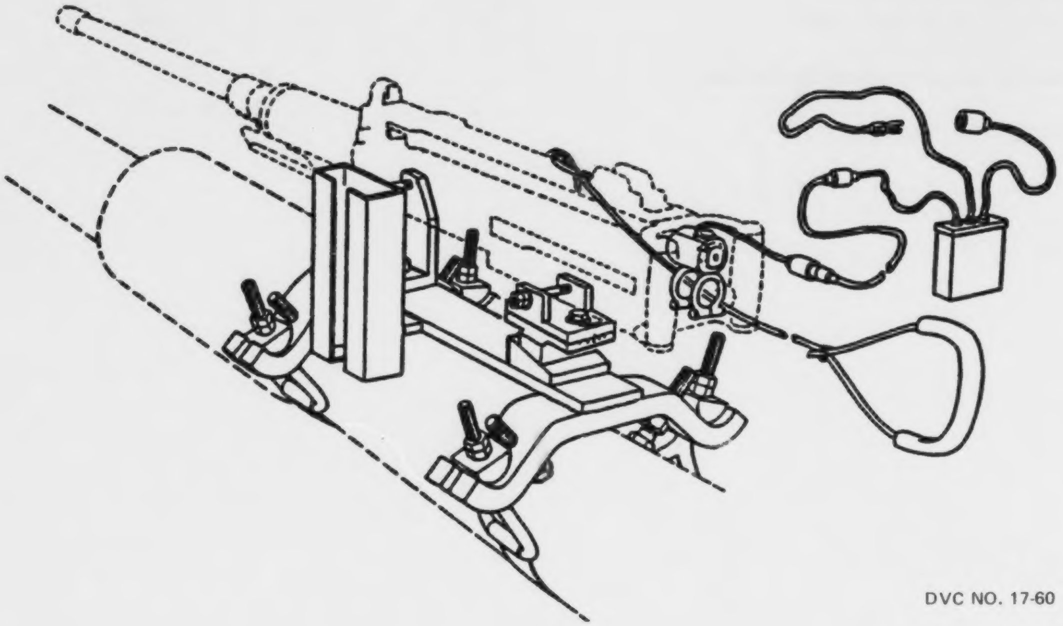
SM 171-139 Tasks

1009
1030

MOUNT, MACHINEGUN: .50 CALIBER TRAINING DEVICE (TELFARE)

DVC 17-60
M179

NSN 6920-01-117-8693



DVC NO. 17-60

Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:

This is a mounting device which permits substitution of the M2 .50 Caliber Machinegun for the M60 Series Tank 105mm gun and the SHILLELAGH 152mm gun/launcher. This device is used for subcaliber firing at full scale ranges. It permits the more realistic full scale gunnery tables to be fired in preparation for qualification without the expense of 105mm ammunition. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The device consists of the following: (1) Mount assembly; (2) traversing and elevating mechanism; (3) strap assembly; (4) pull cable assembly; (5) solenoid, (6) controller assembly (single shot device); (7) wiring harness assembly. The device is capable of mounting on the 90mm, 105mm, and 152mm gun tubes and the bore evacuator of the 90mm and 105mm guns. The device mounts the M2 Heavy Barrel Machinegun and fires M20 or M17 ammunition. The device is wired to the control firing circuit and is fired by the gunner's firing trigger. The single shot device insures that only one round is fired each time the trigger is pulled. The pull cable assembly provides the loader with the capability of charging the gun from his hatch.

Physical Information:
20'' x 17'' x 12''; 74 lb

Equipment Required, Not Supplied:
M2 Heavy Barrel Machinegun

Special Installation Requirements:
None

Power Requirements:
24 vdc vehicle voltage

DVC 17-60

Applicable Publications:
TM 9-6920-374-12&P

Reference Publications:
FM 17-12 with supplements

Training Requirements Supported:

ARTEP 17-55 Task

3-32

ARTEP 71-2 Task

6-20

MOSC 19E, 19G, and 19J

SM 171-121 Task

1008

SM 171-127 Tasks

1009
1010
1011
1012
1013
1016
1018
1381
1389
1392
1395
1397
1510
1511
1515
1516
1521
1539
1544
1549
1552
1553
1554
1555
1759
1778
1781

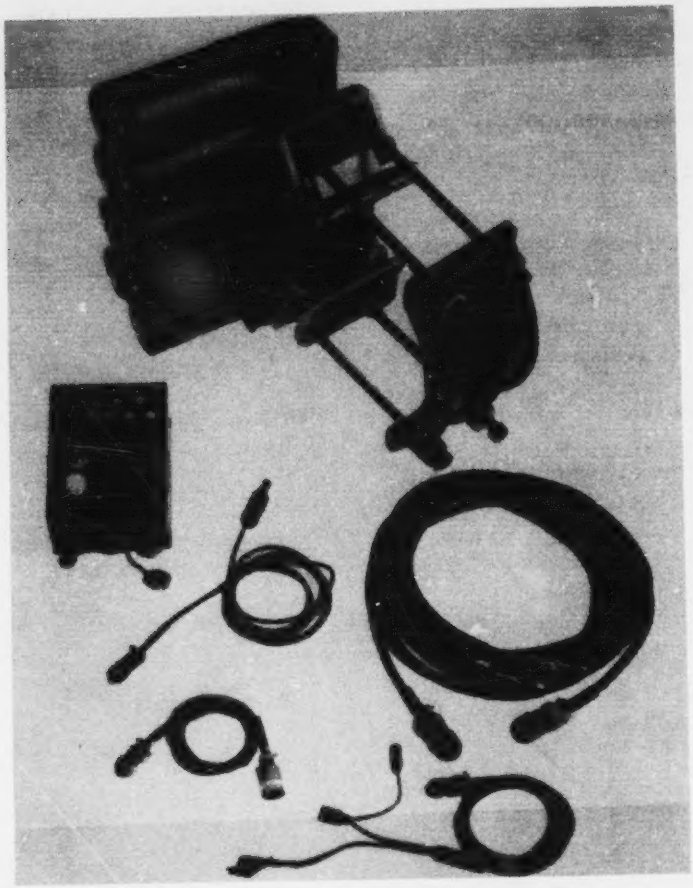
SM 171-139 Tasks

1009
1016
1017
1026
1027
1030
1045

SIMULATOR, TANK GUNFIRE (WESS)

DVC 17-61

NSN 6920-01-067-1667



DVC NO. 17-61

Training Category/Level Utilized:

Armor/Level 3

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Available through local TASCs.

Purpose of Trainer:

The trainer was specifically designed for simulating, audibly and visibly, firing of a gun (tank-antitank) in training operations. The shot of the pyro charge simulates the noise, flash, and smoke of the unit it is mounted on. It makes the practice firing very realistic for both day and night firing. If familiarizes the trainees with the flash and explosion of the guns in action.

Functional Description:

The simulator body of the device can be mounted on 90-152mm gun barrels. The simulator body can be loaded with 9 pyro charges (Simulator, Flash, Artillery: M21, NSN 1370-01-034-1397). These are inserted individually into the firing drums. The electrical connections are connected from the simulator to the firing device inside the tank at the gunner's position. The main cable is connected to the 24 volt tank power supply. The gunner controls the firing of the charges from inside the tank, which when activated, simulates the firing of an actual shell. It produces approximately the same noise, flash, and smoke as the actual shell firing. The device can also be mounted in the field and discharged to indicate a target hit. Different color pyro charges can be used for their specific requirements of utilization in the field.

DVC 17-61

Physical Information:

Simulator body: 12" x 18" x 12"; 77 lb
Clamp assembly: 13 lb
Firing device: 9" x 6" x 3"; 6 lb
Transport and storage container: 34" x 22" x 15"; 95 lb
Total weight: 200 lb

Equipment Required, Not Supplied:

Simulator, Flash, Artillery, M21; NSN 1370-01-034-1397

Special Installation Requirements:

None

Power Requirements:

24 vdc

Special Requirements:

Instructions for handling Simulator, Flash, Artillery: M21, and safety warning notices as published in Technical Manual for Simulator, Tank Gunfire Device 17-61 should be adhered to.

Safety distances when firing:

To the front of the device: 55 yards (50 meters)

On both sides, to right and left of device: 27 yards (25 meters)

Applicable Publications:

Commercial Publications

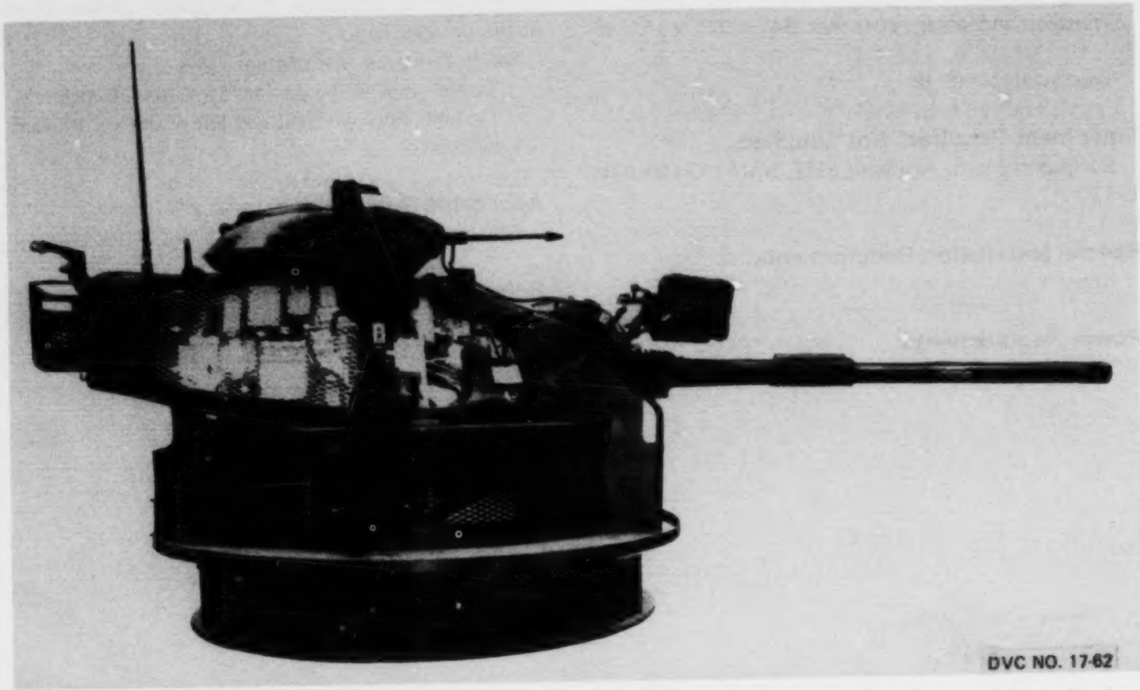
Reference Publications:

None

TRAINER, TANK GUNNERY: 105MM

DVC 17-62
M30A1

NSN 6920-00-181-8785



DVC NO. 17-62

Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is for classroom use to familiarize personnel with operation and maintenance of the M60A1 Tank Turret. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The M30A1 Tank Gunnery Trainer is an instructional aid to train personnel in the operation and maintenance of the M60A1 Tank Turret, 105mm Gun with Add-On-Stabilization, .50 Caliber Machinegun, 7.62mm Machinegun coaxially mounted, and associated sighting and fire control equipment. The trainer is fully equipped with M60A1 Turret components, including on-equipment materiel. Casters provide for trainer mobility in classroom area. Cutouts in the turret wall allow instructors to observe operations from the platform on the turret stand.

Electrical power for turret operation is furnished by a rectifier powerpack, which replaces the conventional tank electrical power source. Hydraulic power for raising the trainer is provided by three manually-operated pumps mounted on the stand assembly.

Physical Information:
313" x 115" x 118"; 36,000 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:

Rectifier 230/460 volts, 3-phase, 50/60 cycles, output voltage 25-31 vdc, with maximum continuous current of 400 A, and maximum current intermittent for 3 minutes 800 A

DVC 17-62

Applicable Publications:

Commercial Handbook of Operation and Maintenance Guidelines

Reference Publications:

TM 9-2350-215 Series
TM 9-2300-378 Series
TM 9-1000-213 Series

Training Requirements Supported:

FM 17-19E1/2, FM 17-19E3, and FM 17-19F1/2

SM 171-123 Tasks

1202 1203

SM 171-124 Tasks

2051 2052 2055

SM 171-127 Tasks

1007 1009 1010 1011
1012 1013 1014 1015
1018 1216 1233 2056
2057 2058 2059

SM 171-132 Tasks

1201 1202 1203 1204

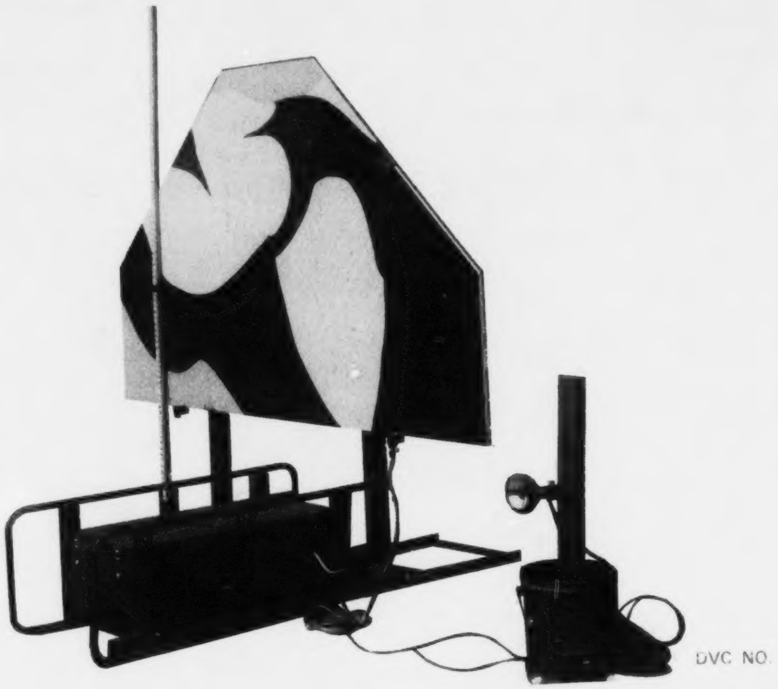
SM 171-139 Tasks

1007 1009 1010 1012 1016
1017 1018 1023 1024
1026 1027 1029 1030
1031 1033 1040 1045

TARGET HOLDING MECHANISM TANK GUNNERY (THM-TG)

DVC 17-63
DVC 17-63/1 Holding Mechanism
DVC 17-63/2 Transmitter Radio

NSN 6920-01-084-6951
NSN 6920-01-085-8514
NSN 5840-01-090-9304



Training Category/Level Utilized:

Armor/Level 3

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Available through local TASC's.

Purpose of Trainer:

To support training of tank gunnery personnel in identifying and firing on hostile vehicles and personnel. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a transmitter, transmitter battery (nickel-cadmium), transmitter battery charger, receiver, electronic control assembly, hit sensor assembly, visual hit indicator, tank target mechanism, tank target mechanism battery charger (lead-acid), and lead-acid battery. The transmitter is man-portable and transmits signals to the receiver. Housing the receiver is the tank target mechanism which, when activated by means of the electronic control unit, elevates and lowers the target. The target will automatically drop to the down position by means of the hit sensor assembly when struck. A visual hit indicator (12V 15 W lamp) is also activated when the target is struck. Provisions are included to permit a hostile fire indicator.

Physical Information:

Transmitter: 13'' x 7'' x 7''
Receiver: 5'' x 6'' x 7''
Tank target mechanism: 61'' x 24'' x 16''

Equipment Required, Not Supplied:

Silhouette targets

Special Installation Requirements:

None

Power Requirements:

Transmitter: 12 vdc nickel-cadmium battery
Tank target mechanism: 12 vdc lead-acid battery

DVC 17-63

Applicable Publications:
TM 9-6920-442 Series

Reference Publications:
FM 17-12 with supplements

Training Requirements Supported:

SM 171-121 Tasks

1008

SM 171-123 Tasks

1204
1354

SM 171-124 Tasks

1754
2055

SM 171-127 Tasks

1009
1014
1018
1381
1389
1395
1397
1521
1539
1544
1552
1555
1778
1781

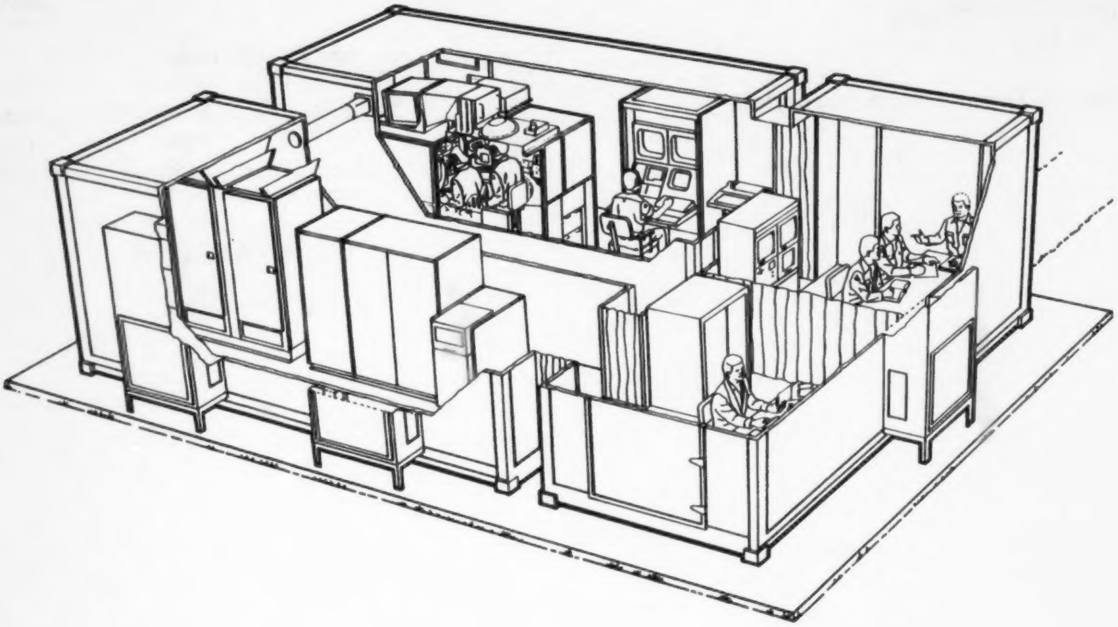
SM 171-139 Tasks

1016
1017
1036
1038

M1 TANK UNIT CONDUCT OF FIRE TRAINER (M1 UCOFT)

DVC 17-66

NSN 6920-01-158-2634



Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To train the Gunner and Tank Commander on the Abrams M1 tank in organizational procedures, target acquisition, reticle aim, target engagement and system management.

Functional Description:
The UCOFT is used at the battalion level primarily to sustain gunnery proficiency of unit gunners and tank commanders (TC) between annual qualification periods. Each UCOFT consists of a crew compartment replication: a gunner station and a TC station; an instructor/operator station; a visual system; an aural/audio system; and a computer system. A computer generated image system provides visual presentations to the gunner and TC through the tank optical system. UCOFT has the ability to train in operational procedures, target acquisition, identification and engagement using either the primary or alternate fire control and sighting equipment. UCOFT provides a simulated battlefield environment with tank-stabilized or unstabilized, stationary and moving, single and multiple arrays, day and night, and reduced visability conditions. The instructor/operator stations allow monitoring of the gunner and TC fire control equipment and selection of the training to be conducted and provides a scoring system for evaluation of crew performance.

Physical Information:
20' x 8' x 8'; weight approx. 30,000 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
UCOFT is installed in three basic mobile facility shelters that are connected to from a complex. The Government provides a clear and level site to specified drainage and compactness, and also electrical and telephone lines. The site must be a minimum of 40' x 38'. When multiple adjacent installations are planned at the same location,

the size of each site may be 40' x 32'. The contractor provides a concrete pad and the electrical interface from the power source. In CONUS and where 60Hz power is available at OCONUS sites, the contractor provides an electrical distribution center as the interface between the power source and the trainer. Where only 50Hz power is available, the contractor installs a transformer.

Power Requirements:

120/208 vac, 3-phase, 50/60 Hz, 4 wire

Maximum peak power is 125 kva, including 20% design reserve.

Applicable Publications:

TM 9-6920-736-10 Operator's Manual

TM 9-6920-736-23 Maintenance, Organizational and Direct Support

TM 9-6920-736-23-100 Drawings and Parts List

TM 9-6920-736-40 Maintenance, General Support

TM 9-6920-736-40-100 Drawings and Parts List

TM 55-6920-736-15 Transportability

Instructor's Handbook

Reference Publications:

TM 9-2350-255-10-1

TM 9-2350-255-10-2

TM 9-2350-255-10-3

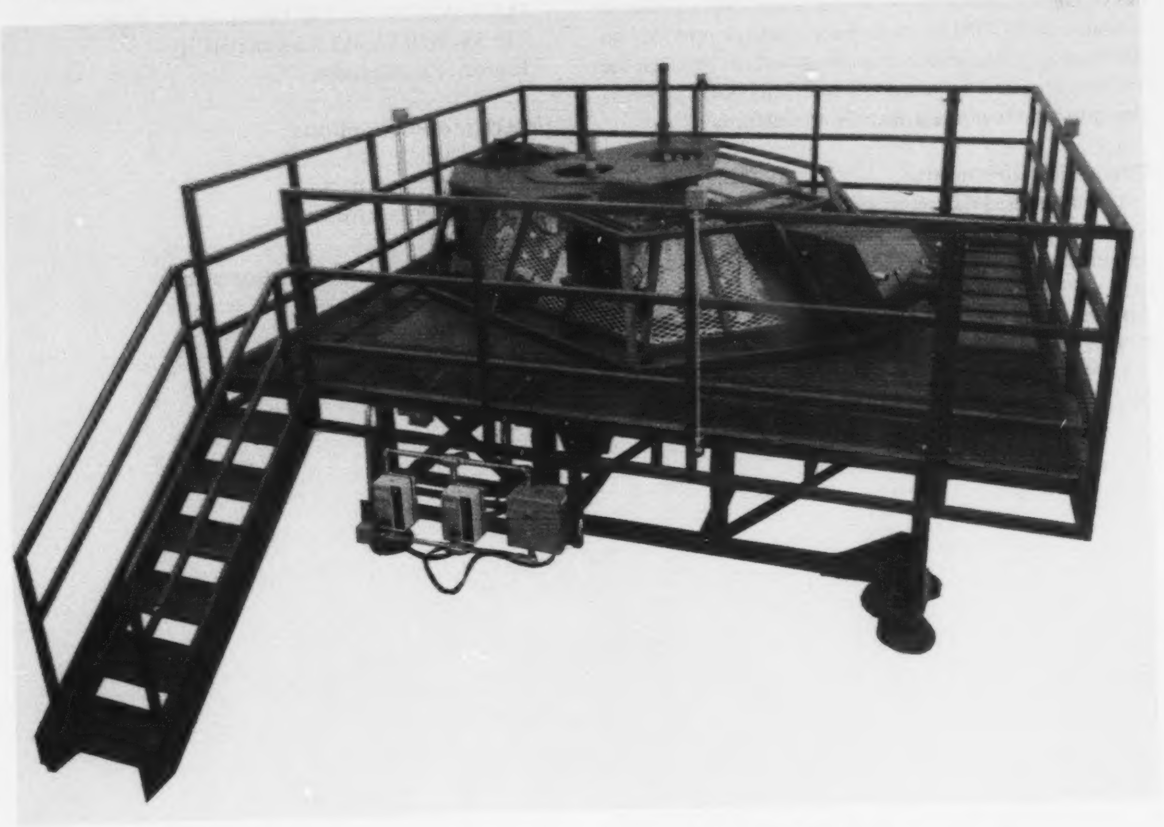
Training Requirements Supported:

MOSC 19K

M1 TANK TURRET ORGANIZATIONAL MAINTENANCE TRAINER (TTOMT)

DVC 17-67

NSN 6910-01-150-4761



Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
These devices train the organizational and DS/GS mechanics in troubleshooting techniques, removal, replacement and repair of the M1 (Abrams) Tank Systems/components.

Functional Description:
The Abrams Maintenance Trainer is a system consisting of:

(1) A Tank Turret Organizational Maintenance Trainer (TTOMT); a full size interactive Turret Simulator that provides hands-on training in fault isolation using a simulated STE-M1 Test Set and removal of interior M-1 Turret components noted by the STE-M1. This is device 17-67.

(2) A programmable panel trainer covering the turret organizational maintenance of the Abrams Tank for training of the organizational mechanic in proper troubleshooting procedures. It is intended for use with the TTOMT and is numbered DVC 17-68/1.

(3) A series of five (5) programmable, computer-driven panel trainers, each addressing a particular component of the Abrams Tank for training of the DS.

DVC 17-67

Physical Information:

TTOMT: 248'' x 186'' x 108''; Weight — Approx. 15,000 lbs

Panels: ALL — 123'' x 28'' x 75''; Weight — Approx. 600 lbs

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Minimum access to installation area for TTOMT is 21 ft. width by 10 ft. height. Floor must support a 17,000 lb. load.

Power Requirements:

110 vac, 15A, 50/60 cycle, single-phase

Applicable Publications:

TM 9-6910-242-10&-24&P (DVC 17-67)
TM 9-6910-243-10&-24&P (DVC 17-68/1)
TM 9-6910-244-10&-24&P (DVC 17-68/2)
TM 9-6910-244-10&-24&P (DVC 17-68/3)
TM 9-6910-248-10&-24&P (DVC 17-68/4)
TM 9-6910-247-10&-24&P (DVC 17-68/5)
TM 9-6910-246-10&-24&P (DVC 17-68/6)

Reference Publications:

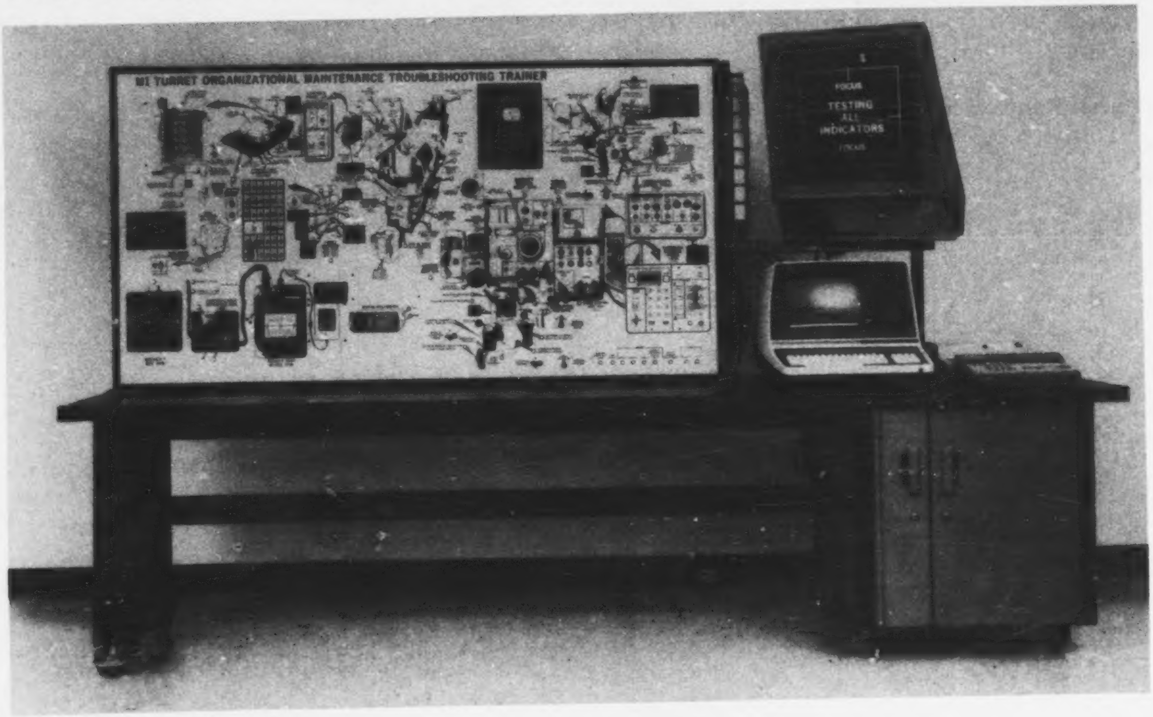
None

Training Requirements Supported:

MOSC 45K

M1 (ABRAMS) TANK MAINTENANCE TRAINERS

17-68/1 M1 Turret Organizational Maintenance Troubleshooting Trainer	**NSN 6910-01-151-7774**
17-68/2 M1 Turret Electrical and Hydraulic Troubleshooting Trainer	**NSN 6910-01-151-7776**
17-68/3 M1 Ballistic Computer and Laser Rangefinder Troubleshooting Trainer	**NSN 6910-01-151-7775**
17-68/4 M1 Hull Electrical Troubleshooting Trainer	**NSN 6910-01-151-7779**
17-68/5 M1 AGT 1500 Turbine Engine Troubleshooting Trainer	**NSN 6910-01-151-7778**
17-68/6 M1 X1100-3B Transmission Troubleshooting Trainer	**NSN 6910-01-151-7777**


M1 TURRET ORGANIZATIONAL MAINTENANCE TROUBLESHOOTING TRAINER
TESTING ALL INDICATORS

Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
These devices train the organizational and DS/GS mechanics in troubleshooting techniques, removal, replacement and repair of the Abrams Tank Systems/ components.

Functional Description:
The M1 (Abrams) Tank Maintenance trainer is a system consisting of:

(1) A Tank Turret Organizational Maintenance Trainer (TTOMT), a full size interactive Turret Simulator that provides hands-on training in fault isolation using a simulated STE-M1 Test Set and removal of interior M-1 Turret components noted by the STE-M1. This is device 17-67.

(2) A programmable panel trainer covering organizational maintenance of the Abrams Tank for training the organizational mechanic in proper troubleshooting procedures. It is intended for use with the TTOMT and is numbered DVC 17-68/1.

(3) A series of five (5) programmable, computer-driven panel trainers, each addressing a particular component of the Abrams Tank for training the DS mechanic in troubleshooting procedures. Each panel trainer provides visual and audio cues to the student as he troubleshoots to isolate one fault or a series of faults programmed into the trainer by the instructor. These are numbered 17-68/2 through 17-68/6, as shown above.

Physical Information:

Panels: ALL - 123" X 28" X 75"; Weight - Approx. 600 lbs.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Minimum access to installation area for TTOMT is 21 ft. width by 10 ft. height. Floor must support a 17,000 lb. load.

Power Requirements:

110 vac, 15A, 50/60 cycle, single-phase.

Applicable Publications:

TM 9-6910-243-10&-24&P (DVC 17-68/1)
TM 9-6910-244-10&-24&P (DVC 17-68/2)
TM 9-6910-244-10&-24&P (DVC 17-68/3)
TM 9-6910-248-10&-24&P (DVC 17-68/4)
TM 9-6910-247-10&-24&P (DVC 17-68/5)
TM 9-6910-246-10&-24&P (DVC 17-68/6)

Reference Publications:

None

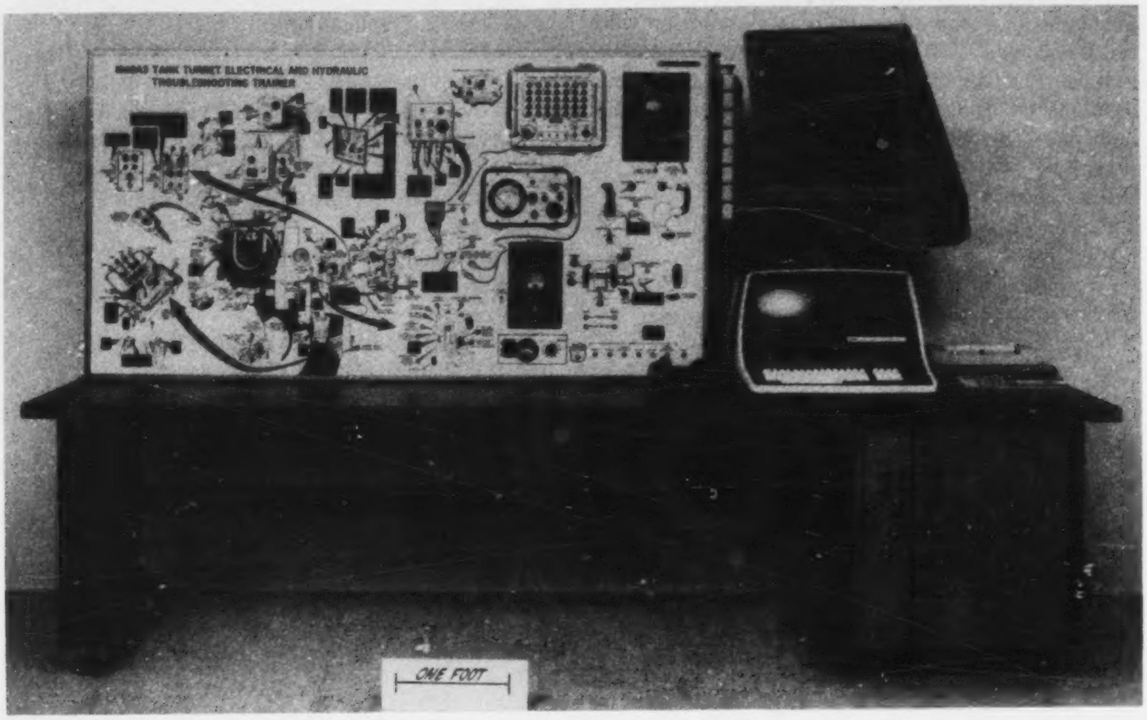
Training Requirements Supported:

DVC 17-68/1: MOSC 45K
DVC 17-68/2: MOSC 45K
DVC 17-68/3: MOSC 34G
DVC 17-68/4: MOSC 63G
DVC 17-68/5: MOSC 63H
DVC 17-68/6: MOSC 63H

M60A1/A3 TANK TURRET ELECTRICAL AND HYDRAULIC TROUBLESHOOTING TRAINER

DVC 17-69

NSN Pending


M60A3 TANK TURRET ELECTRICAL AND HYDRAULIC TROUBLESHOOTING TRAINER
ONE FOOT

Training Category/Level Utilized:
Armor/Level 2

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

To supplement training on the actual vehicle, to reduce training costs, and to provide an expanded and more flexible training capability. To avoid the limitations associated with the operational vehicle, which include training with less than the full spectrum of maintenance problems and potential damage to the vehicle. The specific training requirements supported are shown following the descriptive data.

Functional Description:

This trainer is a programmable, computer driven, panel trainer simulating the M60A1/A3 Tank turret hydraulic and electrical systems. It is used to teach proper troubleshooting procedures to both organizational and DS/GS maintenance personnel. Each programmable panel trainer will provide visual and audio cues to the student as he troubleshoots to isolate one or more faults programmed into the trainer by the instructor.

Physical Information:
Mainframe with panel: 123'' x 75'' x 28''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
115/220 vac, 60/50 cycle

Applicable Publications:
TM 9-6920-433 Series

Reference Publications:
TM 9-2300-378 Series
TM 9-2350-257 Series

DVC 17-69

Training Requirements Supported:
MOSC 45N

SM 171-45N Tasks

1005
4001
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5001
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5010
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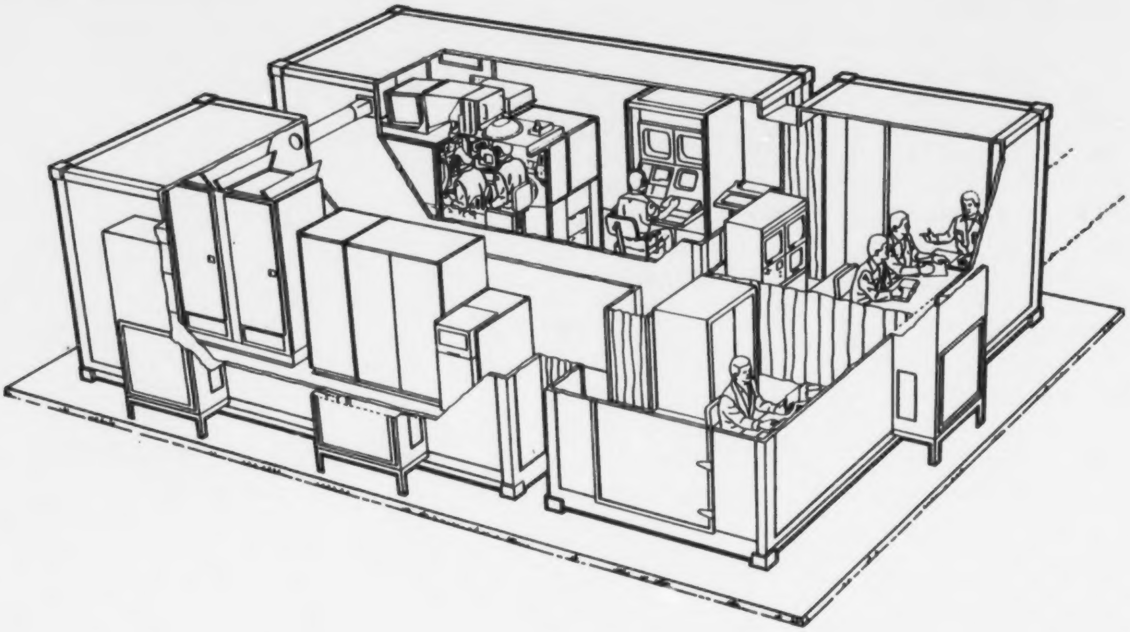
5016
5017

M60A3 TANK UNIT CONDUCT OF FIRE TRAINER (M60A3 UCOFT)

DVC 17-70 **NSN 6920-01-158-2637**



Training Category/Level Utilized:

Armor/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To train the Gunner and Tank Commander on the M60A3 tank in organizational procedures, target acquisition, reticle aim, target engagement and system management.

Functional Description:

The UCOFT is used at the battalion level primarily to sustain gunnery proficiency of unit gunners and tank commanders (TC) between annual qualification periods. Each UCOFT consists of a crew compartment replication: a gunner station and a TC station; an instructor/operator station; a visual system; an aural/audio system; and a computer system. A computer generated image system provides visual presentations to the gunner and TC through the tank optical system. UCOFT has the ability to train in operational procedures, target acquisition, identification and engagement using either the primary or alternate fire control and sighting equipment. UCOFT provides a simulated battlefield environment with tank-stabilized or unstabilized, stationary and moving, single and multiple arrays, day and night, and reduced visibility conditions. The instructor/operator stations allow monitoring of the gunner and TC fire control equipment and selection of the training to be conducted and provides a scoring system for evaluation of crew performance.

Physical information:

20' x 8' x 8'; weight approx. 30,000 lb.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

UCOFT is installed in three basic mobile facility shelters that are connected to form a complex. The Government provides a clear and level site to specified drainage and compactness, and also electrical and telephone lines. The site must be a minimum of 40' x 38'. When multiple adjacent installations are planned at the same location, the size of each site may be 40' x 32'. The contractor provides a concrete pad and the electrical interface from the power source. In CONUS and where 60Hz power is available at OCONUS sites, the contractor provides an electrical distribution center as the interface between the power source and the trainer. Where only 50Hz power is available, the contractor installs a transformer.

Power Requirements:

120/208 vac, 3-phase, 50/60 Hz, 4 wire

Maximum peak power is 125 kva, including 20% design reserve.

Applicable Publications:

TM 9-6920-738-10 Operator's Manual

TM 9-6920-738-23 Maintenance, Organizational and Direct Support

TM 9-6920-738-23-100 Drawings and Parts List

TM 9-6920-738-40 Maintenance, General Support

TM 9-6920-738-40-100 Drawings and Parts List

TM 55-6920-738-15 Transportability

Instructor's Handbook

Reference Publications:

TM 9-2350-253-10

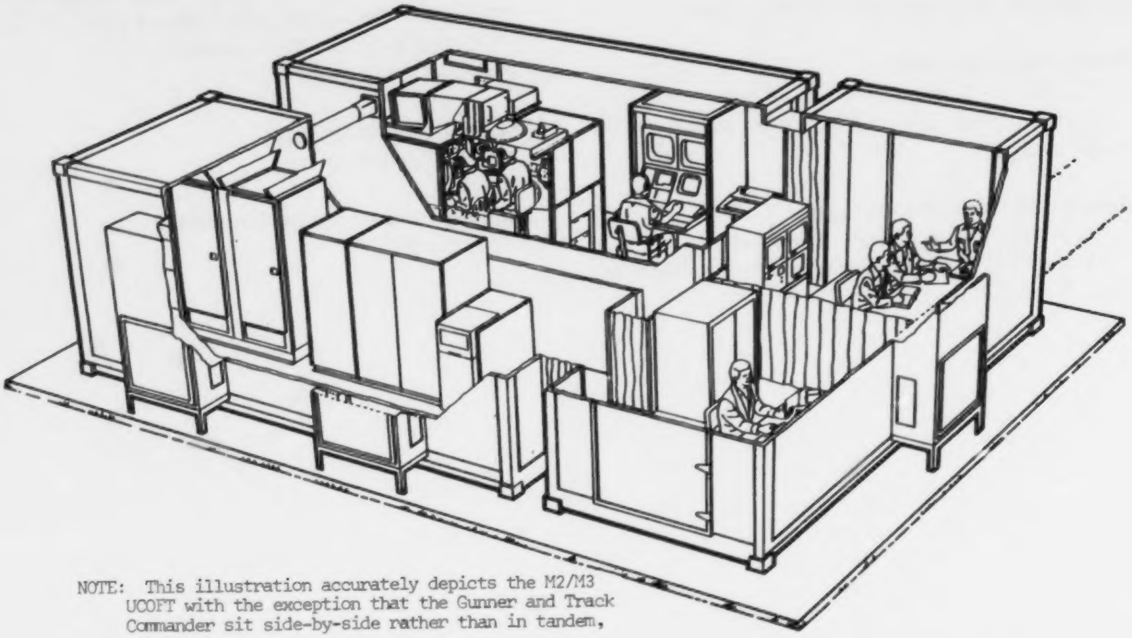
Training Requirements Supported:

MOSC 19E

BRADLEY FIGHTING VEHICLE UNIT CONDUCT OF FIRE TRAINER (M2/M3 UCOFT)

DVC 17-74

NSN 6920-01-158-6756



NOTE: This illustration accurately depicts the M2/M3 UCOFT with the exception that the Gunner and Track Commander sit side-by-side rather than in tandem, as shown.

Training Category/Level Utilized:
Armor (M3)/Infantry (M2)/Level 1

Logistic Responsible Command, Service or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To train the Gunner and Track Commander on the Bradley Fighting Vehicle in organizational procedures, target acquisition, reticle aim, target engagement and system management.

Functional Description:
The UCOFT is used at the battalion level primarily to sustain gunnery proficiency of unit gunners and track commanders (TC) between annual qualification periods. Each UCOFT consists of a crew compartment replication; a gunner station and a TC station; an instructor/operator station; a visual system, an aural/audio system; and a computer system. A computer generated image system provides visual presentations to the gunner and TC through the vehicle optical system. UCOFT has the ability to train in operational procedures, target acquisition, identification and engagement using either the primary or alternate fire control and sighting equipment. UCOFT provides a simulated battlefield environment with track stabilized or unstabilized, stationary and moving, single and multiple arrays, day and night, and reduced visability conditions. The instructor/operator stations allow monitoring of the gunner and TC fire control equipment and selection of the training to be conducted and provides a scoring system for evaluation of crew performance.

Physical Information:
20' x 8' x 8'; weight approx. 30,000 lb.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
UCOFT is installed in three basic mobile facility shelters that are connected to from a complex. The Government provides a clear and level site to specific drainage and compactness, and also electrical and telephone lines. The site must be a minimum of 40' x 38'. When multiple adjacent installations are planned at the same location, the size of each site may be 40' x 32'. The contractor provides a concrete pad and the electrical interface from

the power source. In CONUS and where 60Hz power is available at OCONUS sited, the contractor provides an electrical distribution center as the interface between the power source and the trainer. Where only 50Hz power is available, the contractor installs a transformer.

Power Requirements:

120/208 vac, 3-phase, 50/60 Hz, 4 wire

Maximum peak power is 125 kva, including 20% design reserve.

Applicable Publications:

TM 9-6920-737-10 Operator's Manual

TM 9-6920-737-23 Maintenance, Organizational and Direct Support

TM 9-6920-737-23-100 Drawings and Parts List

TM 9-6920-737-40 Maintenance, General Support

TM 9-6920-737-40-100 Drawings and Parts List

TM 55-6920-737-15 Transportability

Instructor's Handbook

Reference Publications:

TM 9-2350-252-10-1

TM 9-2350-252-10-2

TM 9-2350-252-10-3

Training Requirements Supported:

MOSC 11M (M2 BFV)

MOSC 19D (M3 BFV)

TRAINER, LAUNCHER, CONDUCT-OF-FIRE (IMPROVED)

DVC 17-124 **NSN 6920-01-048-8558**

DVC NO. 17-124

Training Category/Level Utilized:
Armor/Level 2

Logistic Responsible Command, Service, or Agency:
MICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

This device simulates the firing of the SHILLELAGH Missile. It will permit M60A2 and M551 gunners to be trained in missile gunnery without regard to constricted range areas and at a greatly reduced cost and hazard. Together with subcaliber devices, this device provides a complete gunnery training capability for the M60A2 and M551. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The COFT-I is designed for mechanical, electrical, and optical use in conjunction with operational turrets of the M551AR/AAV and the M60A2 Tank. The COFT-I provides realistic training in the techniques of fire of SHILLELAGH system gunners through optical simulation of firing reaction and flight behavior of the missile in response to gunner input when utilizing the integral vehicular fire control system.

The major components of the COFT-I include a Control Display Unit (CDU), Optical Simulation Unit (OSU), Launch Recoil Simulator (LRS), power cable, and a Passive Target (DVC 17-125). Their principle functions are:

a. CDU: This unit contains computer circuitry and provides data on gunnery proficiency. A visual display device in the CDU enables the instructor to monitor tracking while a 12-block matrix indicates errors being committed by the student during a firing exercise. It also provides a percentage score based on the gunner's ability to remain on target while tracking and to attain a target hit.

b. OSU: This component mounts in front of the gunner's telescope port, optically superimposes a missile tracer image in the gunner's field of view, and simulates smoke obscuration and missile detonation.

c. LRS: This unit consists primarily of a brow pad connected to the gunner's telescope which moves rearward on missile launch in order to simulate the effects of launcher recoil.

d. Power cable: The cable is a single moulded rubber cable that interconnects all components of the firing vehicle and the COFT-I system.

Physical Information:

CDU: 14" x 12" x 12"; 26 lb
OSU, visual effects simulator: 16" x 9" x 8"; 32 lb
OSU, infrared projector: 11" x 4" x 5"; 7 lb
LRS: 6" x 7" x 7"; 5 lb
Power cable: 480"

Equipment Required, Not Supplied:
None

DVC 17-124

Special Installation Requirements:
None

Power Requirements:
24 vdc

Applicable Publications:
TM 9-6920-466 Series
TM 9-2330-227-14

Reference Publications:
None

Training Requirements Supported:
MOSC 19G and 19J

SM 171-127 Tasks

1008
1012
1385
1397
1759
1764

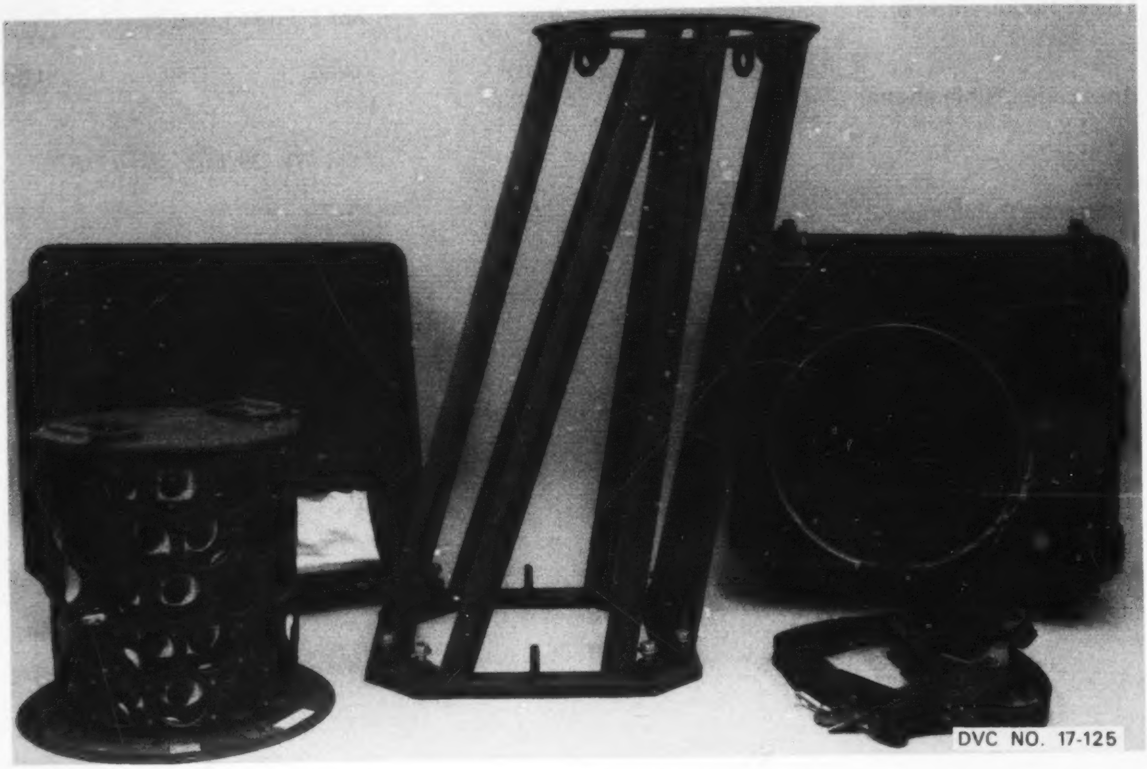
SM 171-139 Task

1009

TRAINER, TARGET, CONDUCT-OF-FIRE (IMPROVED)

DVC 17-125
M63

NSN 6920-01-048-8557


DVC NO. 17-125

Training Category/Level Utilized:
Armor/Level 2

Logistic Responsible Command, Service, or Agency:
MICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To function as a target for use in conjunction with the M62 COFT-I Trainer (DVC 17-124).

Functional Description:
The target is passive and contains a series of lightweight reflectors capable of receiving a transmitted beam of infrared light from the Optical Simulation Unit of DVC 17-124 and reflecting it back to the tracking vehicle.

Physical Information:
Target: 17'' high x 16'' diameter; 51 lb
Universal target adapter: 40'' x 29''; 54 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

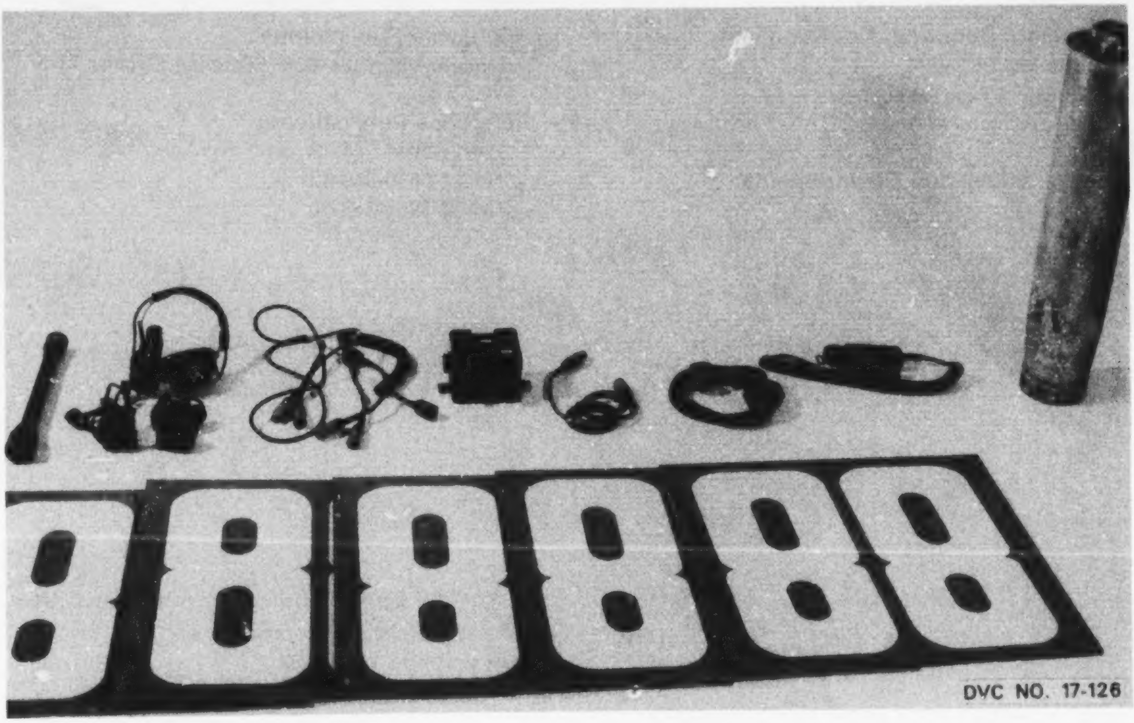
Power Requirements:
None

Applicable Publications:
TM 9-6920-466 Series
TM 9-2330-227-14

Reference Publications:
None

MONITORING KIT, SIMULATED TANK ENGAGEMENT MK-1777/G

DC 17-126 NSN 1015-01-024-9643



Training Category/Level Utilized:

Armor/Level 2

Logistic Responsible Command, Service, or Agency:

CECOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To add realism to field training exercises of two opposing small-unit forces and to provide a creditable system to assess casualties in the training environment at company level or below.

Functional Description:

The system is designed to use fixed focal length 10 power telescopes mounted in main tank guns of two opposing small-unit forces. Telescopes are alined with the weapons sights, allowing controllers to see the same sight picture as gunners, and permitting them to verify a gunner's aim during target engagements. Gunners "shoot" at targets by announcing the identification numbers worn by soldiers or displayed on vehicles while the target is alined in their sights. The controllers verify aim and award "hits" or "misses." This data is transmitted by the controller via the controller command package.

The device consists of the following:

Telescope - 10X (fixed focal length)
Headset - Microphone H-16/ c/u (modified)
Connector plug, electrical U-229/V
Control, intercommunication set, C-2298/VRC
Cable assembly, special purpose, electrical, CX-4723/VRC (72")
Cable Assembly, special purpose, electrical, CX-7867 (144")
Microphone, dynamic M-80C/U
* Breach mount for telescope, 90mm, 105mm, or 152mm
* Number sets, panel, vehicular, 2 digit

Note: Items marked with an asterisk are not in federal supply system but are replaced through the TASC system.

DVC 17-126

Physical Information:
Varies among components

Equipment Required, Not Supplied:
Radio set, PRC-77
Simulator, Tank Gunfire
Blank firing adapters for COAX Machinegun

Special Installation Requirements:
None

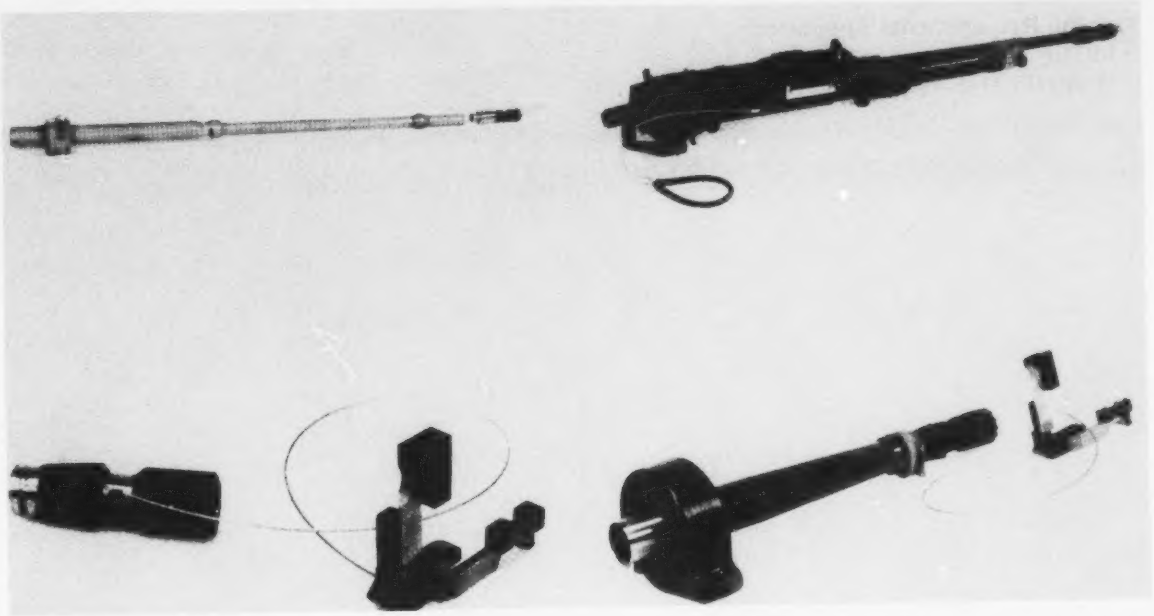
Power Requirements:
None

Applicable Publications:
Department of the Army Training Circular 71-5

Reference Publications:
TM 11-5965-262-13
TM 11-5830-340-12
TM 11-5965-268-50

M21 BLANK FIRING ATTACHMENT

DVC 17-134 **NSN None**



Training Category/Level Utilized:

Armor/Level 3

Logistic Responsible Command, Service, or Agency:

AMCCOM

Source and Method of Obtaining:

Available thru local TASC's

Purpose of Trainer:

The M21 Blank firing Attachment permits the firing of linked blank 7.62mm ammunition in the M240 Machine Gun. This allows simulation of live round firing in tactical engagement exercises to support tactical training.

Functional Description:

The M240 MG is gas operated, i.e.; gases behind the exiting bullet are bled off thru ports in the barrel and this back pressure is used to cycle the weapon for continuous firing. The orifice in the M21 BFA is designed to duplicate that action by restricting blank firing gases and creating back pressure that will provide a cyclic rate similar to the rates experienced using service ammunition.

The M21 Blank Firing Adapter for the M240 Machine Gun is designed to replace the Flash Rider on the weapon for training exercises. Of one-piece cast corrosion resistant steel, the BFA design incorporates a specific sized orifice to restrict gases generated by blank firing just as a bullet passing thru the barrel and a parabolic chamber to enhance the aural signature of the weapon under blank firing conditions. Fins on the outer diameter of the BFA help dissipate heat buildup. The front end of the BFA is designed to accept installation of various extensions to insure expulsion of gases when the M240 MG/M21 BFA combination is used in the M60AL/A3 Tank, or M1/M1E1 MBT.

Physical Information:

Weight: Approximately 3 lb. (Each component)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-1005-316-12&P

DVC 17-134

Reference Publications:

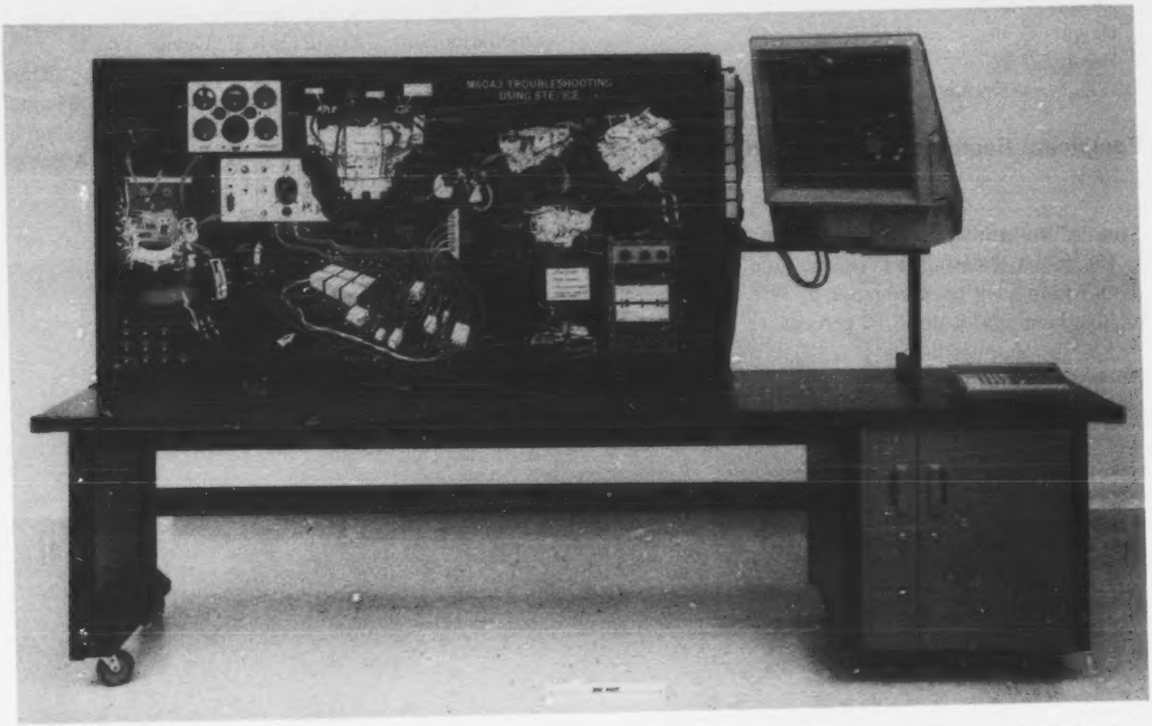
TM 9-1005-313 Series

Training Requirements Supported:

ARTEP 71-2
MOS 11B, 11M, 19D, 19E, 19K

M60A3 TROUBLESHOOTING USING STE/ICE TRAINER

DVC 17-135 **NSN None**



Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to provide maintenance training and familiarization for selected systems of an M60A3 vehicle. The trainer provides organizational, direct support (DS), and general support (GS) maintenance personnel with training in operating procedures, symptom analysis, and troubleshooting procedures.

Functional Description:

Device 17-135 is a computer-based training system, providing operating and maintenance characteristics for simulated M60A3 vehicle systems.

The device consists of a display panel of simulated M60A3 system components and vehicle test meter (VTM), an EC 3 computer, videodisc player and monitor, control console, two diskette drive units, visuals, two flexible diskettes, trainer power cable, operator's manual, and maintenance manual. An accessories box containing a simulated VTM current probe, tachometer probe, two pressure transducers and five cable assemblies are also supplied with the trainer.

This student/instructor operated device is designed for demonstration or system maintenance hands-on use and requires minimal familiarization time. No warm-up time, special cooling, or special maintenance personnel are required.

Student motivation is accomplished through 23 unique malfunction simulations and immediate performance feedback as the student operates the system and VTM.

Through the use of the control console, the simulated systems on the display panel respond with normal operation or system malfunctions similar to the actual vehicle systems. Student performance is monitored by indicators contained on the control console to indicate total time to solve the problem and components replaced.

DVC 17-135

Physical Information:

Length: 120 in.
Height: 71 in.
Depth: 29 in.
Weight: 485 pounds

Equipment Required, Not Supplied:

None

Special Installation Requirements:

The trainer is designed to operate in a standard classroom within a temperature range of 39°F to 100°F and a relative humidity of up to 80 percent.

Power Requirements:

115 volts, single-phase, 60 Hz, 15 amps.

Applicable Publications:

TM 9-6910-250-10(u), Operator's Manual for M60A3 Troubleshooting Using STE/ICE, Device 17-135.

TM 9-6910-250-24&P(u), Organizational, Direct Support, and General Support Maintenance Manual Including Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts) for M60A3 Troubleshooting Using STE/ICE, Device 17-135.

Reference Publications:

TM 9-2350-253-20-1
TM 9-4910-571-12&P

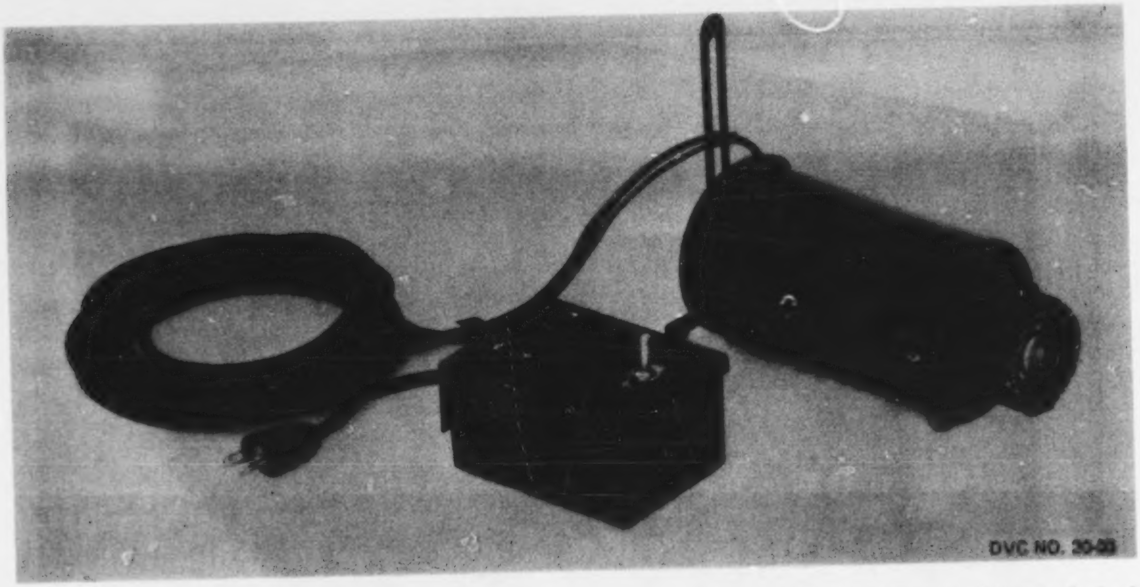
Training Requirements Supported:

MOSC 63H

NIGHT-VISION SHADOWGRAPH PROJECTOR

NSN None

DVC 20-03
5C7



Training Category/Level Utilized:

General/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer is for classroom use to project silhouettes of objects on a screen to teach night-vision techniques to a variety of personnel types under simulated training conditions.

Functional Description:

The device is a light-tight, single-slide projector, which can project a 2" x 2" slide onto a 48" x 144" screen from a distance of 30 feet, or cover a smaller screen at a lesser distance. A voltage control is utilized in the power line to provide variable light intensity. This permits background night simulation on the screen varying from absolute dark through starlight to full moonlight.

Physical Information:

Projector: 14" x 5" in diameter

Equipment Required, Not Supplied:

Projection screen

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

None

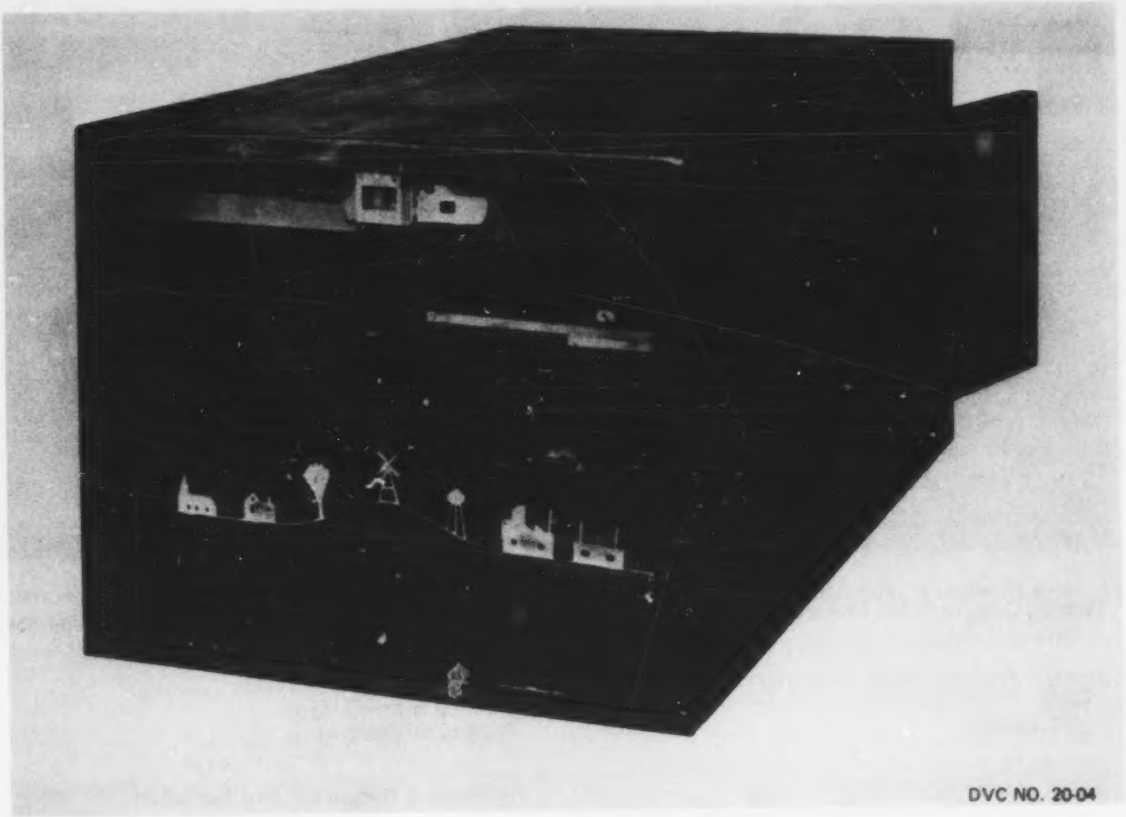
Reference Publications:

None

TWO-DIMENSIONAL NIGHT VISION TRAINER

DVC 20-04
9W

NSN 6920-01-067-1672



DVC NO. 20-04

Training Category/Level Utilized:
General/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is used in the classroom to provide night vision training of pilots and lookout personnel through simulated training exercises conducted in a completely blacked-out room under accurately controlled artificial illumination adjusted to simulate natural outdoor conditions. Trainee background will consist of flying and/or navigation watch experience.

Functional Description:
The device is a basic synthetic vision trainer intended to illustrate two-dimensional shadowgraphs of typical outdoor scenes, projected on a screen, at levels of illumination corresponding to those which would occur on a starlit night. Major components of the device consist of: silhouettes, slide projector, aircraft mechanism, cloud and fog effect guides, turntable, constant voltage transformer, operator's control panel, and accessory kit. The device is housed in a wooden box with two compartments, accessible from both ends.

Physical Information:
30'' x 18'' x 15''; 67 lb

Equipment Required, Not Supplied:
None

DVC 20-04

Special Installation Requirements:
None

Power Requirements:
110 vac

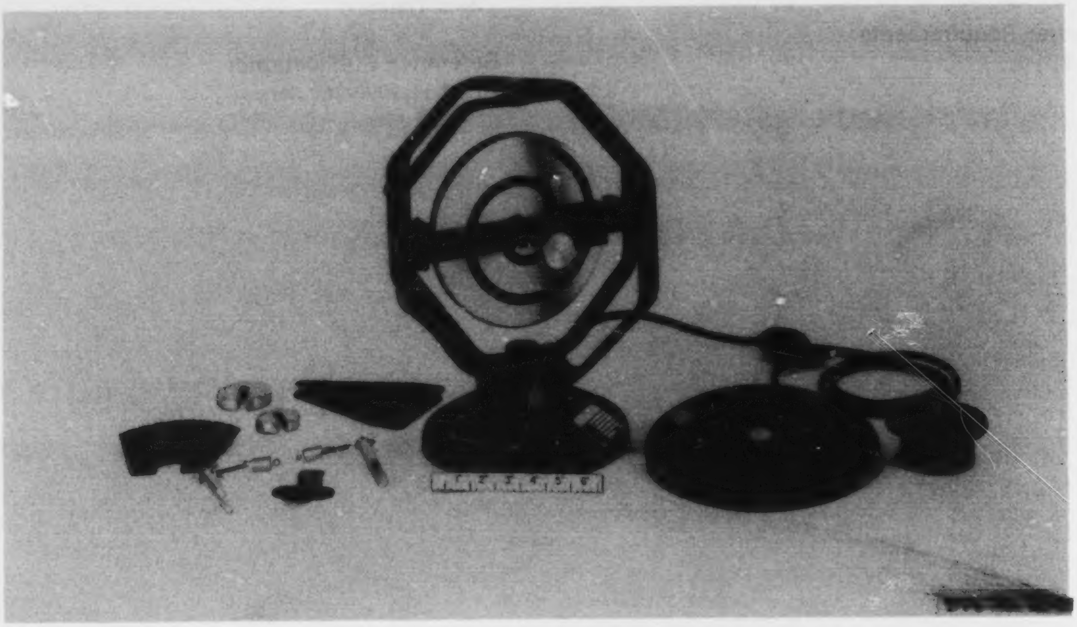
Applicable Publications:
NAVEXOS P-1912, Maintenance Handbook for Night Vision Trainer

Reference Publications:
TM 11-1090-269 Series

CLASSROOM GYROSCOPE TRAINER

DVC 20-06
11H10

NSN None



Training Category/Level Utilized:
General/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to demonstrate gyroscopic phenomena and its associated physics phenomena. Knowledge of the principles, functions, and relationships of essential components of the gyroscope may be developed by use of the device.

Functional Description:
The device is a two-degree-of-freedom gyroscope. The vertical axis supports the outer gimbal which can rotate about the vertical axis. The outer gimbal also supports the inner gimbal which permits rotation about the horizontal axis. Therefore, forces can be demonstrated that react in more than one plane.

Physical Information:
Gyroscope: 6'' diameter
Overall height: 10''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

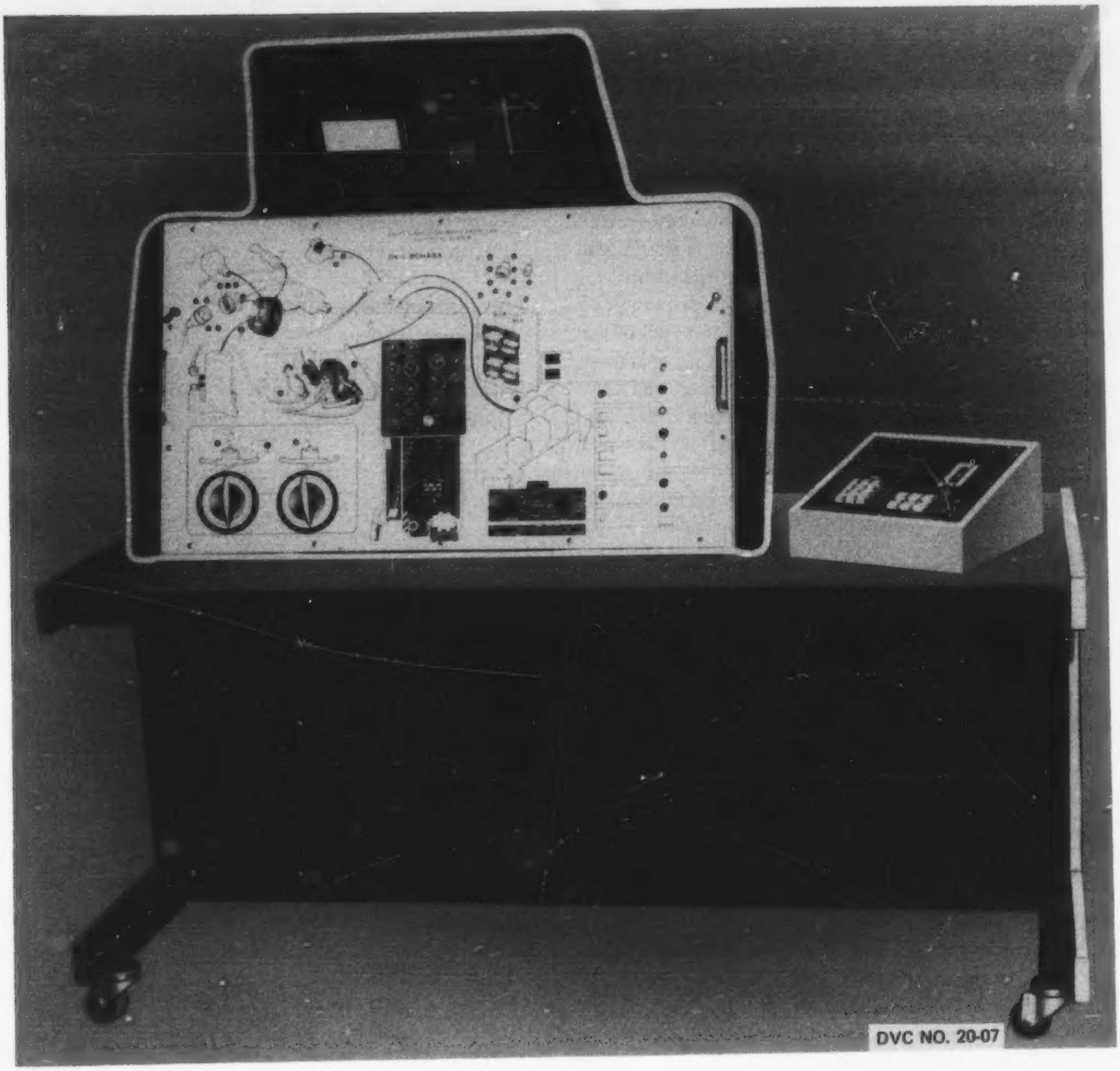
Applicable Publications:
NAVEXOS P-2217, Handbook of Theory and Operation and Experimental Procedure

Reference Publications:
None

BASIC GENERAL PURPOSE SIMULATOR

DVC 20-07
11H67

NSN 6910-01-063-7537



DVC NO. 20-07

Training Category/Level Utilized:
General/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
To provide a one system mainframe console with a variety of interchangeable simulation models for techni-

cal training on theory of operation of selected systems and subsystems, with malfunction and correction capability.

Functional Description:

The device is a console which contains a solid-state programmable digital computer incorporating the modular memory technology. Also incorporated into the console are the power supplies, internal cabling, high-speed random access projector, simulation display panel, view screen, meter, and the control center. The control center is a digital keyboard with digital display indicators featuring pushbuttons for simplicity in activating a simulation, entering preprogrammed malfunctions, and displaying student performance data. The simulation display panel is a three-dimensional, pictorial/schematic model of real equipment; used as the real equipment during operation, the display panel and computer will interpret and compare actions against programmed simulation data stored in memory. Visual information is presented on the screen via the random access projector. In practice, the trainee will operate the device just as he does the real equipment.

Physical Information:

66'' x 65'' x 29''; 400 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

A climatic controlled classroom that maintains the ambient temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

110 vac, 60 cycle

Applicable Publications:

Commercial manual

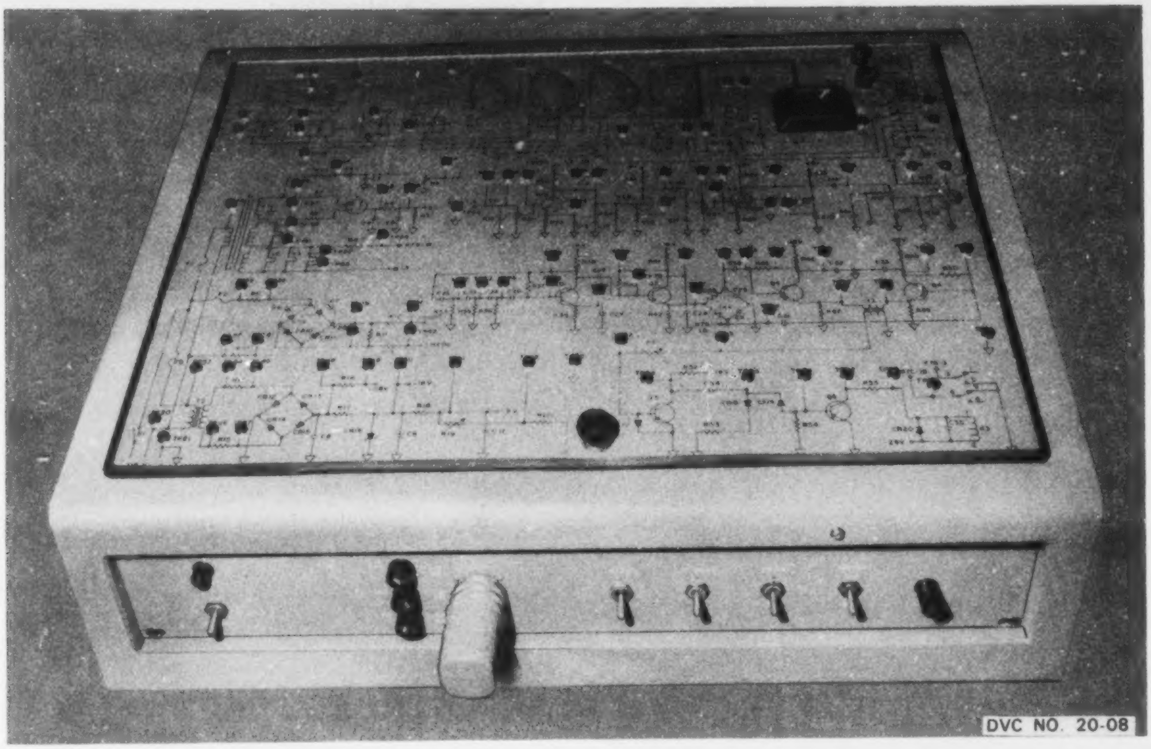
Reference Publications:

None

NUCLEAR WEAPONS TEST SET SIMULATOR

DVC 20-08
12E6

NSN 6920-01-070-0479



Training Category/Level Utilized:
Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
The trainer is for classroom use to dynamically illustrate the typical functions and circuits of nuclear weapons test sets. It is used to train students in the operation, maintenance, troubleshooting, and repair of circuits representative of those found in nuclear weapons test set.

Functional Description:
The trainer contains circuits which are typical of those found in nuclear weapons test sets. These include: solid-state, low-voltage power supply; high-voltage vacuum tube power supply; stepper switch with remote position indicator; relay control circuits; and GO-NO/GO indicators. The circuits are illustrated schematically on the trainer panel with test points at appropriate locations to allow the student to analyze the circuits without access to the interior of the trainer.

There are approximately 40 typical troubles that may be switched into the circuitry. Additionally, the printed circuit boards have plug-in components allowing the instructor to insert any type of problem.

The trainer has provisions for self-check as well as a "dummy" missile attachment.

DVC 20-08

Physical Information:
27" x 21" x 10"; 72 lb

Equipment Required, Not Supplied:
Multimeter, oscilloscope

Special Installation Requirements:
None

Power Requirements:
110 vac, 60 cycle

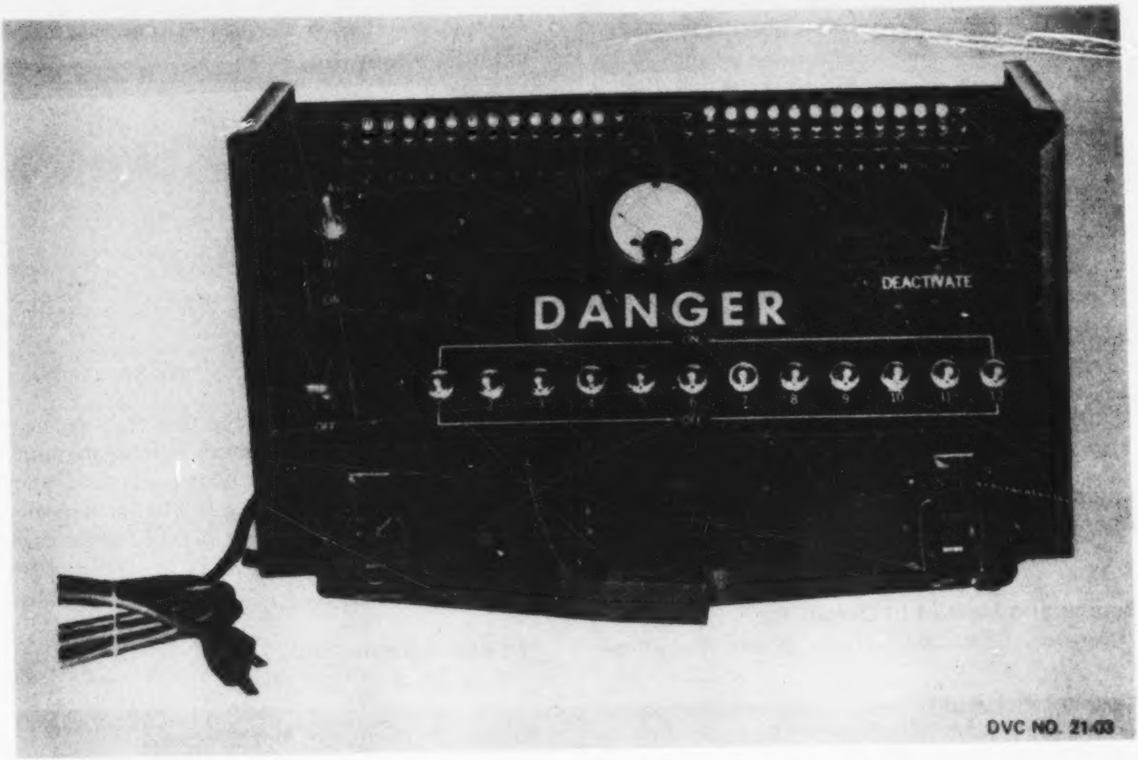
Applicable Publications:
None

Reference Publications:
None

PORTABLE REMOTE-CONTROL DEMOLITION FIRING CONSOLE (GUNFIRE)

DVC 21-03
3C72

NSN None



DVC NO. 21-03

Training Category/Level Utilized:
Individual/Level 3

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Available through local TASCs.

Purpose of Trainer:
The device is designed to be used in infiltration courses and to support field training by providing a fire control device for electrical blasting caps.

Functional Description:
The console operates on internal or external power. A voltmeter on the control panel indicates if the required amount of power is supplied.

Twelve separate demolition charges can be connected to the firing panel. These demolition charges may be remotely fired in any combination selected by the firing panel operator. An individual selector switch is provided for each of the demolition charges. A FIRE switch is also supplied to fire the charges. A DEACTIVATOR is located on the panel as an extra safety feature.

Physical Information:
12'' x 9'' x 18''; 8 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
Internal: 90 vdc
External: 110 vac

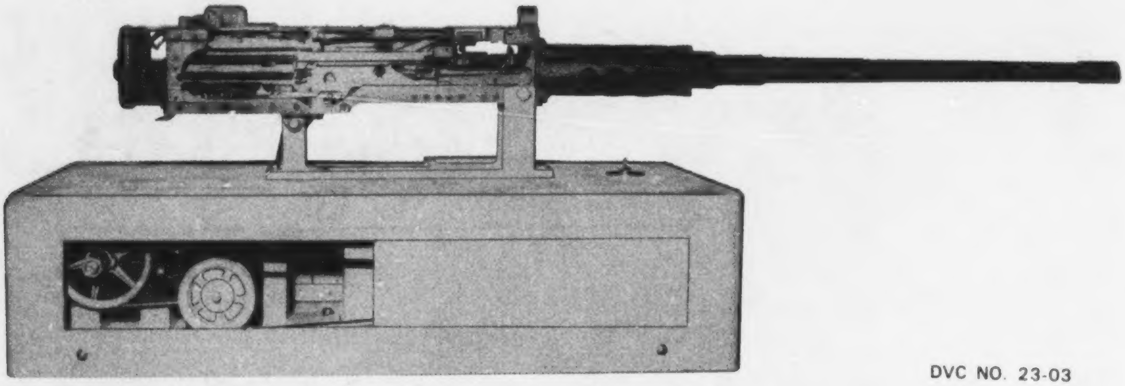
Applicable Publications:
NAVEXOS P-1973, Instructor's Guide for Demolition Firing Console, Device 3C72

Reference Publications:
None

MOTORIZED SECTIONALIZED GUN .50 CALIBER, M2 MACHINEGUN

DVC 23-03
11D4A

NSN 6920-01-067-1684



DVC NO. 23-03

Training Category/Level Utilized:
Basic Weapons/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to demonstrate the cycle of operation of the .50 Caliber M2 Machinegun.

Functional Description:
The device is a motorized, sectionalized .50 caliber machinegun with sections cut out to expose important features for easy examination by students. The firing pin spring, oil buffer spring, and bolt driving spring have been shortened to reduce the force required to drive the device. Electric motors drive the gun through slow motion firing cycles (approximately seven times per minute) while dummy ammunition is fed into the breech mechanism, demonstrating clearly the interrelationship of the working parts. Dummy cartridges that have been ejected from the chamber fall into a compartment below the gun. Movement can be halted at any time with the motor switch, located on top of the cabinet, enabling the instructor or student to point out the relative positions of various parts at any point in the firing cycle. The gun is mounted on a cabinet assembly containing a 1/3 hp 110 vac motor. Thirty dummy cartridges and links are furnished with each gun.

Physical Information:
54" x 24" x 24"; 175 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110 vac

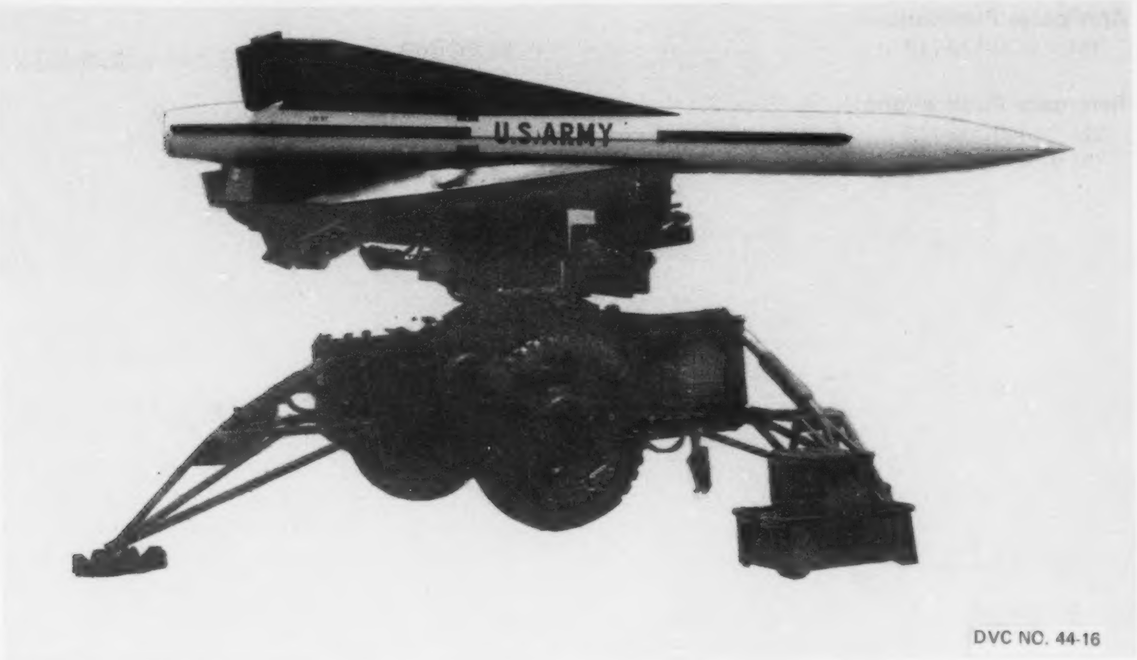
Applicable Publications:
Maintenance Handbook for DVC 23-03

Reference Publications:
TM 9-1005-213

GUIDED MISSILE, INTERCEPT-AERIAL, TRAINER (IMPROVED HAWK)

DVC 44-16
M18E2

NSN 6920-01-023-6123



DVC NO. 44-16

Training Category/Level Utilized:

Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:

MICOM

Source and Method of Obtaining:

Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:

To train troops in the general handling procedures for improved HAWK missiles. Item is to be used at organizational schools, and on-the-job/in-service training of HAWK loader-transporter operators and launcher crewmen. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The training missile is a full-scale missile which duplicates the physical dimensions, weight, and center of gravity of the tactical missile. The training missile is used to provide practical training for operators of the HAWK loader-transporter and launcher crewmen in performing missile transfer operations between pallets and launchers.

Physical Information:

198'' long x 14'' diameter, 47'' wing span; 1,400 lb

Equipment Required, Not Supplied:

Loader-Transporter, GM (HAWK)
Launcher, M192 (HAWK)
Pallet, M1E2 (HAWK)

Special Installation Requirements:

None

DVC 44-16

Power Requirements:
None

Applicable Publications:
TM 9-6920-530-24P

Reference Publications:
TM 9-1440-500-12/1
TM 9-1450-500-10

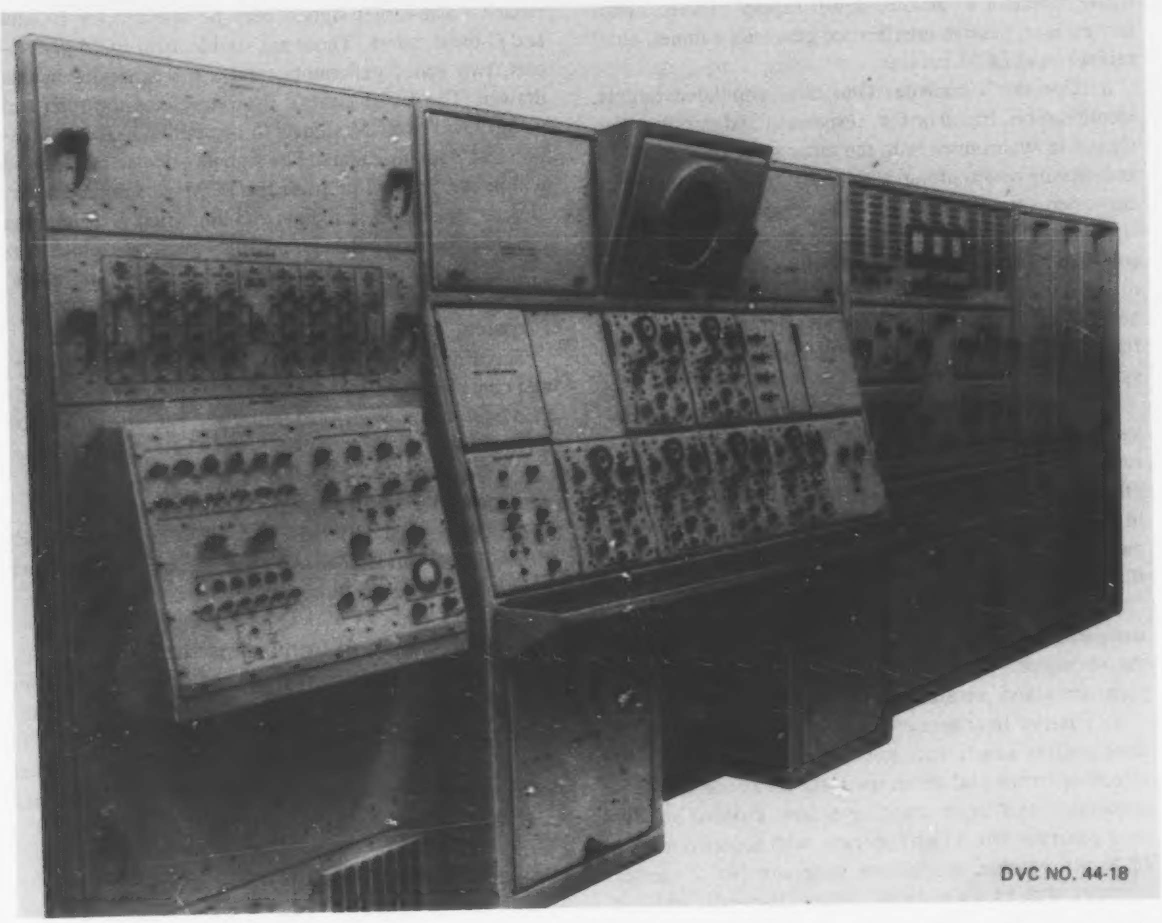
Training Requirements Supported:

	ARTEP 44-245
MOSC 16D	
	SM Task (FM 44-16D)
	1057

RADAR SIGNAL SIMULATOR STATION GUIDED MISSILE SYSTEM: (NIKE HERCULES)

DVC 44-18
AN/MPQ-T1

NSN 1430-00-973-4651



DVC NO. 44-18

Training Category/Level Utilized:
Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:
MICOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
To provide a simulated but realistic combat situation of varying complexity, which will permit training of NIKE-HERCULES/Improved NIKE-HERCULES Missile System fire control operator to function as a team for drill, familiarization, introduction of new tactics, and simulated firing under ECM conditions prior to and during annual service practice, and for countering simulated threats to the area defended without disclosing system capabilities to enemy monitoring devices. To evaluate performance of NIKE-HERCULES batteries, training is accomplished while the simulator station is interfaced with an operational NIKE-HERCULES battery, with fire control operators at their normal combat stations. The specific training requirements supported are shown following the descriptive data.

DVC 44-18

Functional Description:

Interface with the system is via three data cables, through which radio frequency and electrical signals are interchanged. Six major components are located in the trailer: operator's console, power supply cabinet, auxiliary cabinet, passive interference generator cabinet, chaff cabinet, and ECM cabinet.

a. Operator's console. Generates simulated targets; identification, friend or foe, responses; and missile video signals in sychronism with the radar systems. The target and missile video along with chaff and clutter video is converted into intermediate frequency (if) information signals which are amplified within the console. The console also provides monitoring facilities that enable phases of an exercise to be timed. Two connectors located beneath the writing surface permit telephone connection for communication between the simulator and radar system.

b. Power supply cabinet. Provides unregulated dc voltages to units in the simulator. The high-voltage power supply and passive interference generator control panel provide the power requirements for the cathode-ray tubes in the passive interference generators. The circuit breaker panel and indicator panel control the application of B+, filament, and servo voltages to the simulator cabinets.

c. Auxiliary cabinet. Provides voltage regulation, simulated sync pulses, and antenna positioning data for the simulator. The cabinet also provides facilities for monitoring and recording performance.

d. Passive interference generator cabinet. Contains three passive interference generators which simulate the effects of terrain and obstacles in the area scanned by the acquisition and target tracking radars. Passive interference generator No. 1 (left) operates with acquisition radar (C-band), passive interference generator No. 2 (center) operates with target tracking radars (H-band), and passive interference generator No. 3 (right) operates with the acquisition radar (E-band).

e. Chaff cabinet. Simulates enemy ECM in the form of chaff interference during simulator operation with the acquisition and tracking radars.

f. Electronic countermeasures cabinet. Produces simulated jamming interference and antenna pattern information. The ECM intermediate frequency (if) drawer amplifies if jamming and produces normal and side-lobe suppressed (sls) if signals. The ECM generator drawer produces synchronized and/or unsynchronized simulated jamming on the E-band, C-band, and target tracking radars. False-target signals may be selected for E-band and C-band radars. There are six identical ECM generators, two spoof generators, and a prf generator in this drawer. The ECM control drawer selects the type and power level of ECM signals to be applied to the acquisition and tracking radars. The signals selected either from within the drawer, or from the ECM generator drawer, are converted into if signals and amplified. The antenna pattern simulator produces analog waveforms which correspond to the antenna pattern of the acquisition radars.

Physical Information:

The trainer is mounted in a 324" x 96" x 132" trailer, and contains six major consoles and cabinets plus associated equipment. Weight of trailer and equipment: 18,900 lb.

Equipment Required, Not Supplied:

An operational NIKE-HERCULES/Improved NIKE-HERCULES Guided Missile System. An external power source-see Power Requirements.

Special Installation Requirements:

The simulator system is emplaced in the battery control area of a NIKE-HERCULES Guided Missile System. Length of the data cables limits maximum distance to approximately: 90 feet from battery control van, 90 feet from radar control van, and 225 feet from auxiliary acquisition radar.

Power Requirements:

The simulator station itself requires a maximum of 7 kva when all the cabinets are energized. In addition, there are three air-conditioners, each of which requires a maximum of 6 kva. A generator or converter capable of supplying 30 kva or 45 kva with provisions for 208 V, 3-phase, 400 cycle, Y-connected, 4-wire connection, and with standard 28-pin receptacles is required. The simulator station power source must be independent of the power source used by the system.

DVC 44-18

Applicable Publications:
TM 9-1430-268 Series

Reference Publications:
TM 9-1400-250 Series

Training Requirements Supported:

ARTEP 44-535

MOSC 16C

SM Tasks (FM 44-16C)

1045
1047
1048
1050
1064
1070
1071
1072
3015

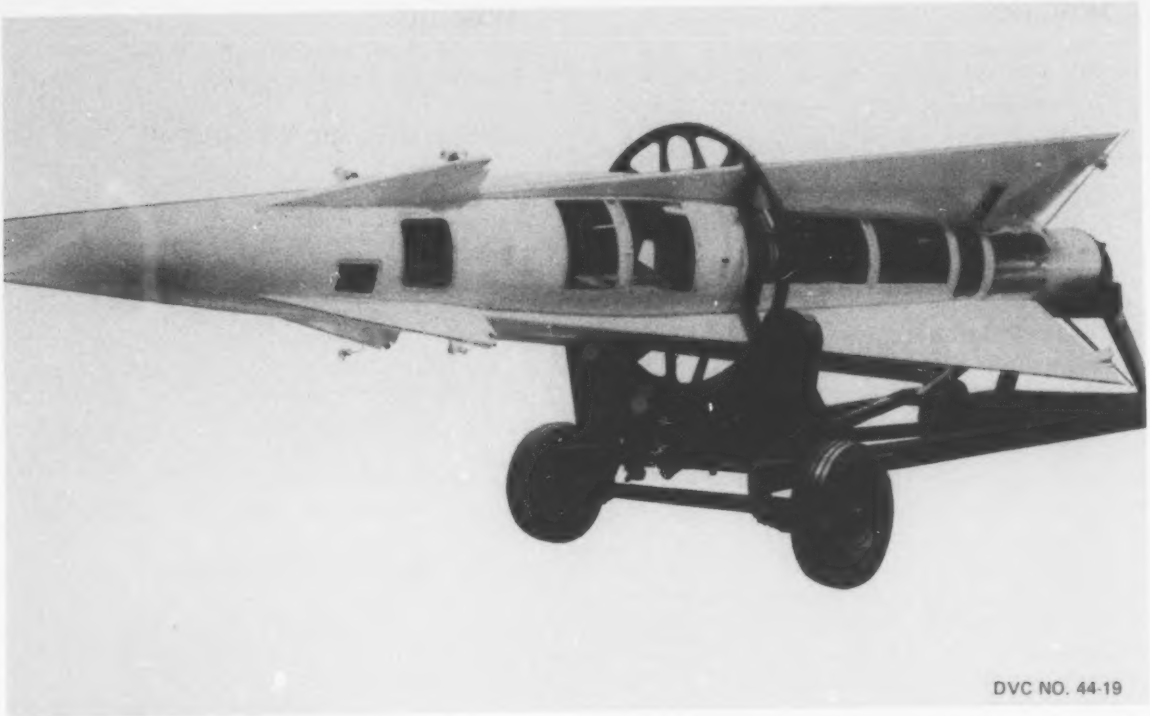
ARTEP 9-59 Tasks

43
45
48

MOSC 23U

BODY SECTION, ROCKET MOTOR, TRAINER GUIDED MISSILE: (NIKE-HERCULES)

DVC 44-19A M84	NSN 6920-00-893-3163
DVC 44-19B M29	NSN 6920-00-580-6481
DVC 44-19C M30	NSN 1336-00-799-7951
DVC 44-19D M74	NSN 1105-00-831-6015


DVC NO. 44-19

Training Category/Level Utilized:
Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:
MICOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
For classroom use to provide a means of presenting details and operation of the NIKE-HERCULES Missile to support the training of personnel in basic assembly and handling procedures for the rear body section of the missile. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The NIKE-HERCULES (Air Defense) Trainer consists of:

a. Body Section, Guided Missile Training, M84, NSN 6920-00-893-3163.

b. Rocket, Motor, Cluster, Trainer, M29, NSN 6920-00-580-6481.

c. Sustainer Motor, Inert, M30, NSN 1336-00-799-7951.

DVC 44-19

d. Guided Missile, Warhead Trainer, M74, NSN 1105-00-831-6015.

M84 consists of a trainer body section and four trainer main fins. The trainer body section consists of a trainer motor section, a trainer equipment section, and a trainer activator section. The M84 also serves as a connecting section between the training warhead and the inert rocket motor cluster trainer, M29. The trainer main fins consists of the trainer forward main fins, trainer rear main fins, and trainer elevons.

The trainer motor section, M30, is formed of aluminum skin riveted to five structural members. The motor section equipment consists of a forward dome dummy heater assembly, a forward dome heater assembly cap, and a receptacle dummy connector. The two motor section access doors, one on each side of the rear portion of the motor section, provide access to internal equipment. An IGNITOR access cover plate is located on the right side of the motor section.

The trainer equipment section is formed of aluminum skin riveted to structural members. The equipment contained in the equipment section consists of a cable support simulating the missile distribution box, the forward portion of the trainer blast tube and closure installation, and necessary ballast. The trainer umbilical cable assembly passes through the trainer skin in the lower portion of the equipment section. Two equipment section access cover plates, one on each side of the equipment section, provide access to internal equipment.

The trainer actuator section is formed of aluminum skin riveted to three structural frames. The actuator section equipment consists of a lanyard assembly, a bracket assembly, or a plate and plug for attaching the lanyard assembly, and ballast. The rear portion of the trainer blast tube is located in this section. Eight alinement spacers are located at equal intervals around the center circumference of the actuator section. Two actuator section door assemblies, one on each side of the actuator section, provide access to internal equipment.

The four trainer main fins, located at 90° angles around the circumference of the training warhead section and trainer body section, are alined with the four forward fins on the training forward body section. Each trainer main fin consists of a trainer forward main fin, trainer rear main fin, and trainer elevon.

Physical Information:

Missile: 324" long x 30" diameter; fin diameter 60"
Rocket motor: 168" long x 54" square; fin diameter 72"
Sustainer motor: 92" long x 29" diameter
Warhead: 150" long x 24" diameter

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-1410-250 Series

Reference Publications:

TM 9-1400-250 Series

Training Requirements Supported:

ARTEP 44-535

MOSC 16B

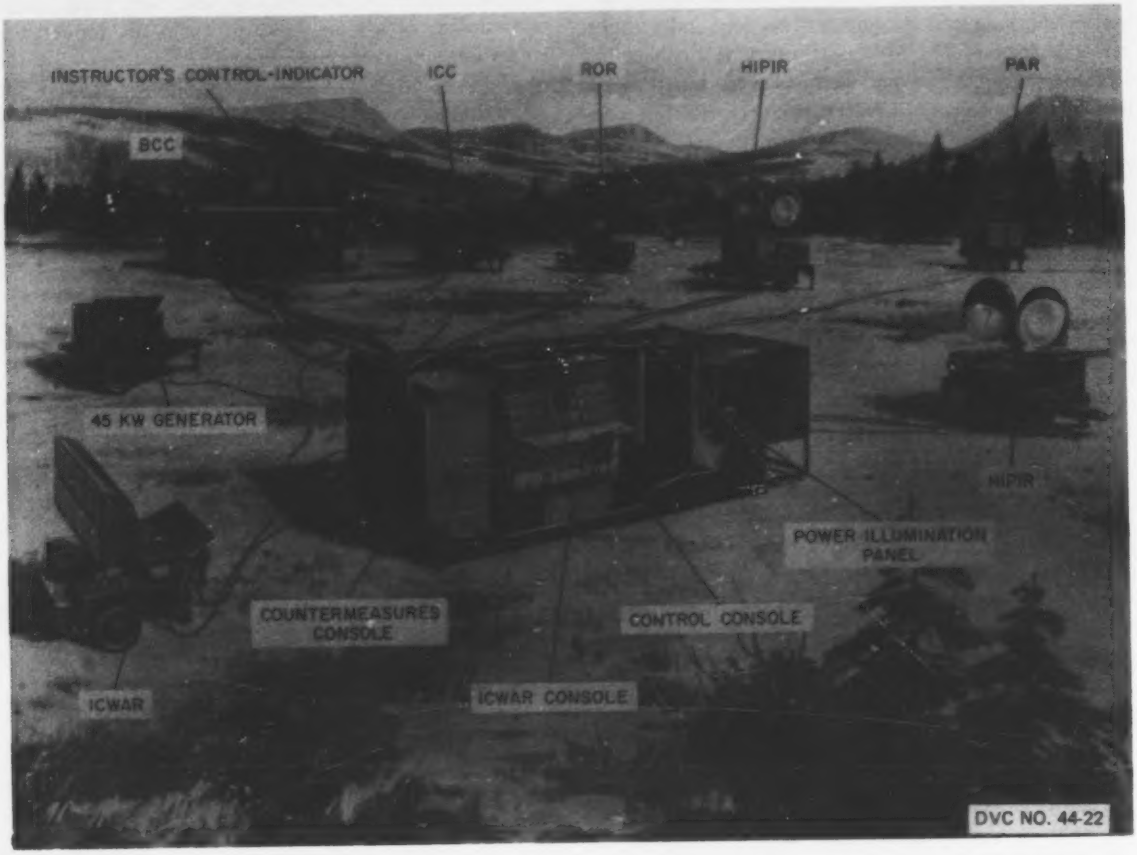
SM Tasks (FM 44-16B)

1050 1054 1057 3018
1051 1055

RADAR SIGNAL SIMULATOR STATION GUIDED MISSILE SYSTEM: (IMPROVED HAWK)

DVC 44-22
AN/TPQ-29 (XO-1)(W/E)

NSN 1430-00-880-3357


INSTRUCTOR'S CONTROL-INDICATOR
ICC
ROR
HIPIR
PAR
BCC
45 KW GENERATOR
HIPIR
POWER ILLUMINATION PANEL
COUNTERMEASURES CONSOLE
CONTROL CONSOLE
ICWAR
ICWAR CONSOLE
DVC NO. 44-22

Training Category/Level Utilized:

Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:

MICOM

Source and Method of Obtaining:

Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:

For classroom and field use to train both students and fire control personnel to acquire, track, and destroy simulated or real targets in a simulated ECM environment. The trainer is also used to support the HAWK training curricula, Annual Service Practice, and HAWK AD Battalions to maintain a combat readiness posture. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The HAWK Simulator Station consists of 11 basic functional systems: 6 computerized simulated target generators, 4 radar simulators, and a special effects system (missile loading, launching, target kill, AADCP, ECM, and scoring BCC Fire Control Team).

Physical Information:

Craig shelter with trainer: 81'' x 83'' x 188''; 8,200 lb
Control console: 65'' x 60'' x 38''; 1,400 lb
Countermeasure console: 72'' x 49'' x 26''; 1,050 lb

DVC 44-22

Improved cw acquisition radar console: 67'' x 37'' x 12''; 250 lb
Frequency counter: 14'' x 21'' x 11''; 50 lb
Instructor control box: 6'' x 4'' x 3''; 2 lb
Power distribution panel: 10'' x 17'' x 9''; 35 lb
Relay panel: 66'' x 45'' x 8''; 230 lb

Equipment Required, Not Supplied:
Shop equipment, (FM) AN/TSM-104, NSN 4935-00-782-1956

Special Installation Requirements:
None

Power Requirements:
240/416 vac

Applicable Publications:
None

Reference Publications:
TM 9-1430-512 Series

Training Requirements Supported:

ARTEP 44-245

MOSC 16E

ARTEP 9-59 Tasks

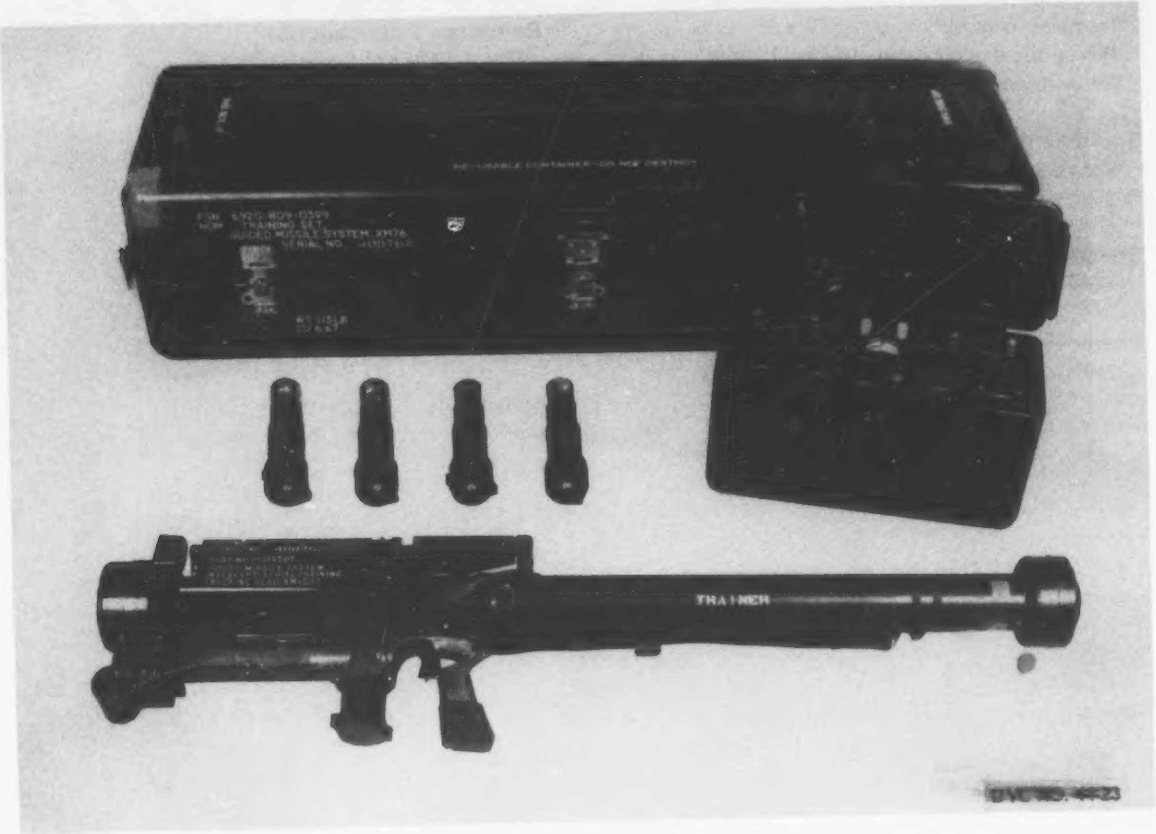
56 57

MOSC 24H

GUIDED MISSILE TRAINER: (REDEYE)

DVC 44-23
M76

NSN 6920-00-809-0399



Training Category/Level Utilized:
Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:
MICOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
Moving target simulator for field use to support training in the tracking and firing of REDEYE Guided Missiles, and to train students in seeking, tracking, and destroying infrared targets. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The training set, Guided Missile M76, is an infrared acquisition intercept aerial guided missile system. Its operation is in five steps: the first is activation, second is IR acquisition, third is gyro uncaged/seeker tracking, fourth is superelevation/lead, and the final step is the firing sequence.

The trainer system provides the REDEYE gunner with a system for initial training, formal training, and additional periodic training to maintain proficiency. The periodic training provides minimizing of the expenditure of REDEYE tactical weapon rounds and in-flight targets.

This trainer replaces the interim REDEYE Trainers XM49, XM49E1, and XM49E2, and ancillary equipment. Activation, deployment, and distribution data are contained in Major Items Analysis (Report No. RCS138) DCSLOG Form 216.

DVC 44-23

The training set consists of a Tracking Head Trainer M49, four dry batteries BA-523 (O-1) PSQ, battery charger PP-6118 (O-1) PSQ, and shipping and storage container M590.

The trainer M49 consists of a missile simulator contained within the launch tube of the launcher simulator. The trainer is similar in appearance to the REDEYE tactical weapon M41 with the exception of a compressor actuator assembly (gas pump handle) mounted on the launch tube, two gas pressure gages (high and low) visible through a plastic window in the forward launch tube, a performance indicator assembly fitted under the gyro coil casting, a battery-voltage indicator mounted in the left half of the gripstock, a gas fill port located above the desiccant holder, a thermometer installed in the place of the desiccant holder, a heavy-duty stop provided for the safety and actuator device, and a rubber bumper (dish assembly) fitted to the rear protective shock ring which also serves as a gas pressure relief valve.

The four batteries are similar in configuration to the battery/gas unit used wilth the tactical weapon, the difference being an additional 3 inches in length and 2 pounds in weight. Each battery is capable of delivering power for fifteen 60-second training missions without recharging.

The battery charger is a compact, solid-state, trickle-type charger housed in a metal container with hinged lid provided with fasteners. Space fuses and lamps are provided within the container lid. The battery charger is capable of charging one to four batteries at a time.

The shipping and storage container is an aluminum two-piece shell with capacity for the trainer M49, a battery charger, and four batteries. A depressurization valve is provided to equalize internal pressure with the atmosphere before the container is opened.

The trainer head has a closed-loop coolant system that recirculates freon to cool the seeker. Operating pressure is obtained by the manually-operated gas pump. Under normal conditions 9 to 11 training sequences can be accomplished when the cooling system is properly pressurized.

Physical Information:

Tracking Head Trainer M49 (without battery): 50" x 6" x 14"; 29 lb

Dry battery BA-523 (O-1) PSQ: 9" x 3"; 4 lb

Battery charger PP-6118 (O-1) PSQ: 16" x 7" x 11"; 28 lb

Shipping and storage container M590: 56" x 17" x 13"; 45 lb (empty), 116 lb (loaded)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The battery charger requires 110 vac, 60 cycle

Applicable Publications:

TM 9-6920-428

Reference Publications:

None

Training Requirements Supported:

MOSC 16P

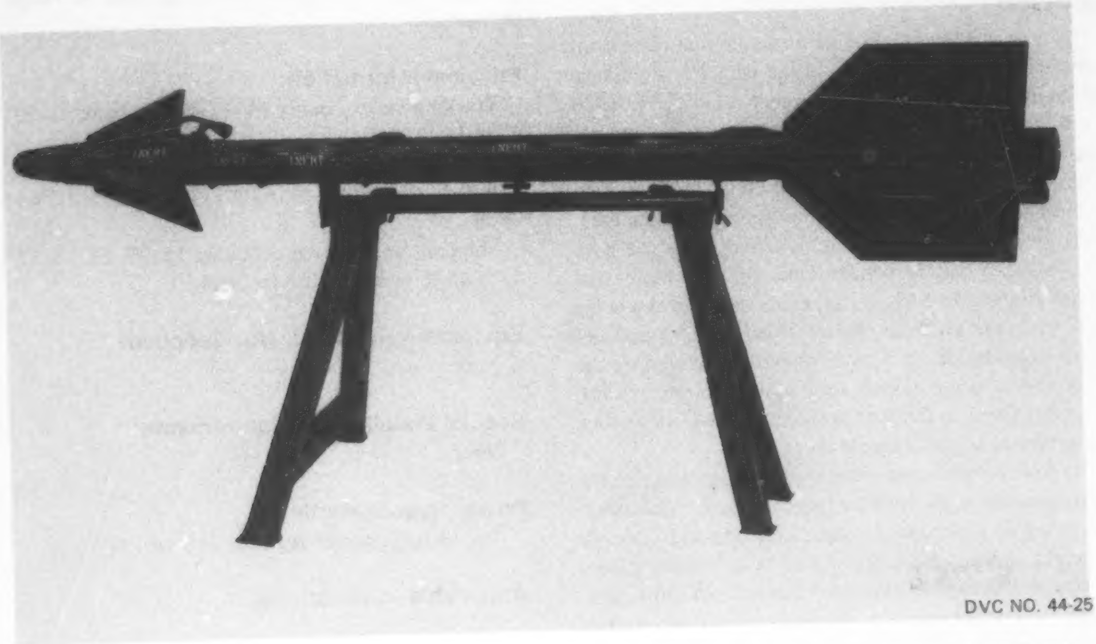
SM Tasks (FM 44-16P)

1057	1061

GUIDED MISSILE INTERCEPT-AERIAL TRAINER: (CHAPARRAL)

DVC 44-25
M30

NSN 6920-00-880-2466



DVC NO. 44-25

Training Category/Level Utilized:

Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:

MICOM

Source and Method of Obtaining:

Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:

For classroom or field use to support training on the CHAPARRAL Guided Missile System, and to provide user personnel with a simulated tactical missile configuration including identical weight and handling characteristics. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer M30 is a guided missile intercept-aerial inert weapon round identical in size, weight, and outer configuration to the tactical weapon XMIM 72A. The trainer is packaged for issue in a properly marked shipping and storage container XM570.

When performing tracking training exercises (with training missile on launcher rail) a tactical guidance section, with umbilical adapter plug, is substituted for the inert guidance section of the trainer. The use of an umbilical adapter plug is mandatory to preclude a firing impulse (from the firing circuit) igniting the gas grain generator of the tactical guidance section.

Physical Information:

Trainer: 115'' x 5'' without wings or fins; 190 lb
Wing span: 24'' x 25''
Fin span: 17'' x 17''
Container: 125'' x 118'' x 19''; 1,050 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

DVC 44-25

Power Requirements:
None

Applicable Publications:
None

Reference Publications:
TM 9-1410-585 Series

Training Requirements Supported:

ARTEP 44-325

MOSC 16P

SM Tasks (FM 44-16P)

1049 1051 3025 3026
1050 3024

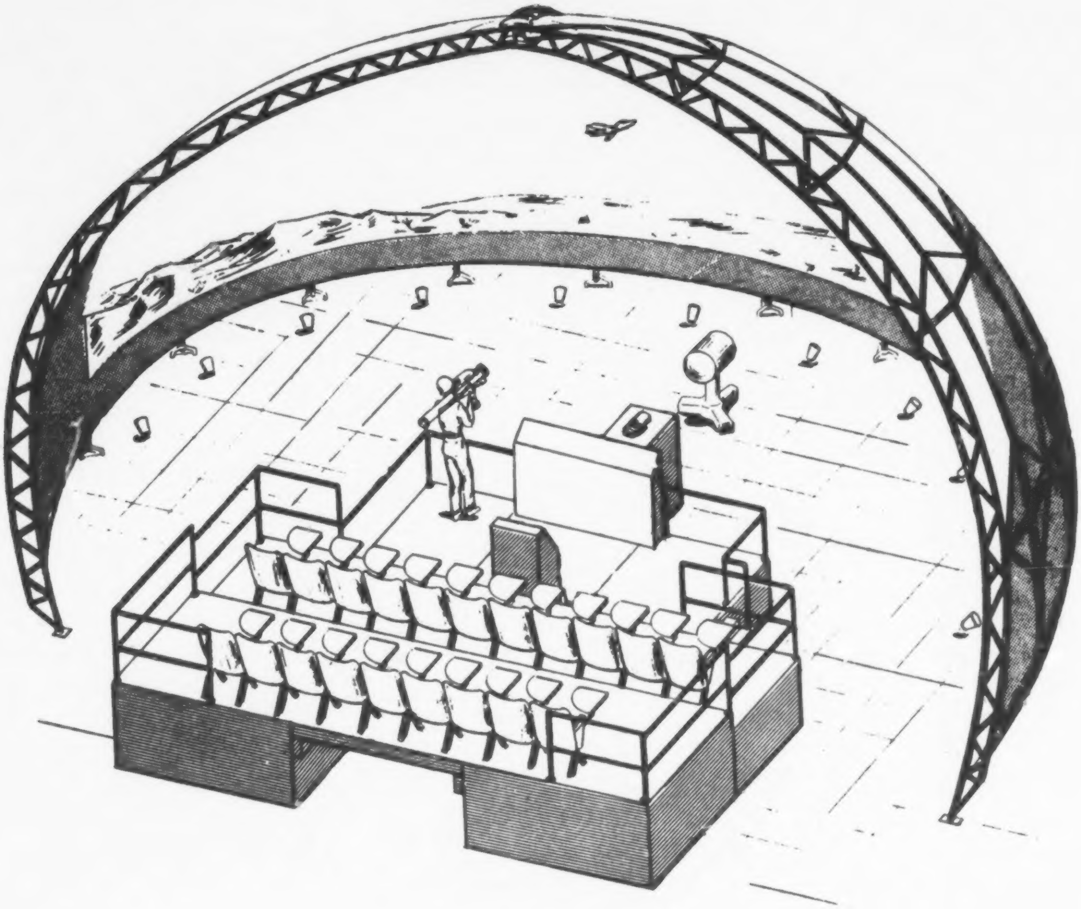
MOVING TARGET SIMULATOR: (REDEYE/STINGER)

DVC 44-27
M87

NSN 6920-00-179-7343

DVC 44-27A
M87A1

NSN 6920-01-049-1878



DVC NO. 44-27

DVC 44-27

Training Category/Level Utilized:
Air Defense/Level 1

Logistic Responsible Command, Service, or Agency:
MICOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

To provide a means of presenting aircraft targets to students in a controlled training environment which represents types and flight paths that may be encountered in a defended area. The trainer can be used to train students on both the REDEYE and STINGER forward area missiles. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The REDEYE moving target simulator provides the sights and sounds representing real tactical aircraft. Initial application will use the REDEYE Tracking Head Trainer device M49 (part of the M76 training set, DVC 44-23). Environmental realism is achieved through the use of a large display area, color target presentation, and stereophonic sound. Target images are projected on a display screen, which is a segment of a 40-foot diameter sphere. Painted background horizons are used to increase realism and provide the trainee with reference points. Moving target images are projected from motion picture film which provides target size and aspect, with changes in azimuth and elevation controlled by a servo-driven, gimballed mirror system which reflects the projected images onto the proper position of the screen. Stereophonic target sound is provided by magnetic recorded sound strips on the target motion picture film. Target infrared emission is furnished to complete the simulation of the tactical environment. The target infrared emission projector provides realistic target signature, in the proper spectrum, superimposed on the target image.

In the firing area, there are two trainee stations, each capable of accommodating an instructor and a trainee equipped with a REDEYE tracking head trainer. Targets can be visually tracked and engagement procedures practiced from each of these stations.

The STINGER/REDEYE trainer has all the capabilities identified above plus instructor cueing, higher speed targets, and IFF functions. The M134 Tracking Head Trainer will be used for STINGER training.

The projection console is located forward of the firing area between the two trainee stations. The console is soundproofed to reduce extraneous noise which could interfere with training. Instructor operating controls and displays are located on the instructor's station at the rear of the firing area.

The observation area is located to the rear of the firing area. This elevated platform is sufficiently close to the firing area to allow observing trainees to hear instructor comments directed toward trainees in the firing area and to permit personnel movement between the two areas.

The moving target simulator for the STINGER/REDEYE Missiles provides real-world environment simulation, including hostile targets, to facilitate training of gunners. This technique of training can be applied to any direct line-of-sight air defense system in which target tracking is accomplished visually by the operator.

Physical Information:
Trainer: 48'' x 312'' x 432''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Suitable building or structure. Requires minor MCA funding.

Power Requirements:
110 vac, 50 cycle, 3 kva

Applicable Publications:
TM 9-6920-427 Series

Reference Publications:
FM 44-17
FM 44-18
FM 44-18-1
FM 44-23
FM 44-23-1

Training Requirements Supported:
MOSC 16P

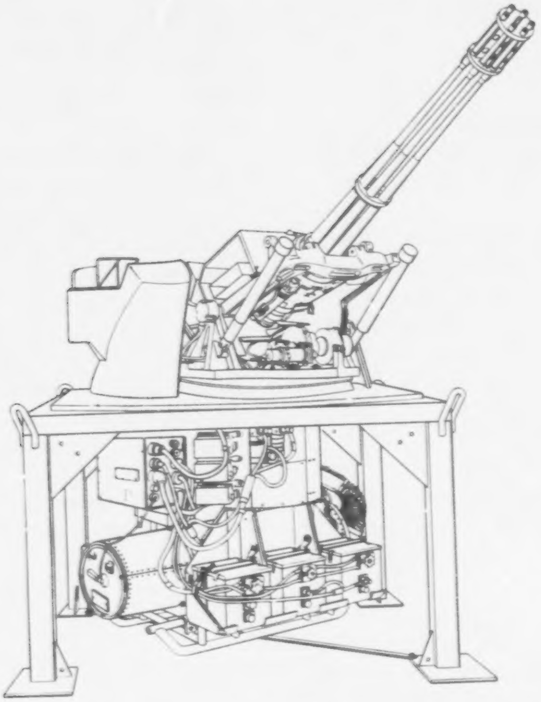
SM Task (FM 44-16P)

1057

TRAINER AIR DEFENSE ARTILLERY MAINTENANCE ARMAMENT

DVC 44-28
M44

NSN 6920-00-880-2563



DVC NO. 44-28

Training Category/Level Utilized:
Air Defense/Level 1

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

To train personnel in armament maintenance at the organizational level. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a gun mount, similar to the M157A1 20mm Gun Mount, which contains only the armament and ammunition storage and feed group components. Components of the fire control and radar groups, M61 sight, inverter, and certain other miscellaneous parts are not included.

The trainer is composed of end item hardware. It provides the maintenance student with maintainable hardware in a classroom environment without the necessity of withdrawing an actual weapon system from a unit.

The trainer is mounted on a welded, tubular-steel maintenance stand. Gussets and steel straps provide extra strength and bracing. Four lifting rings welded to the corners of the stand provide lifting and moving points.

Physical Information:

Test stand: 69'' x 81'' x 52''; 5,400 lb

Trainer overall (with cannon at extreme travel): 120'' x 126'' x 138''

Equipment Required, Not Supplied:
None

Special Installatin Requirements:
None

Power Requirements:
None

DVC 44-28

Applicable Publications:
TM 9-6920-354-14

Reference Publications:
TM 9-2350-300 Series
TM 9-1005-286 Series

Training Requirements Supported:

ARTEP 44-325

MOSC 16R and 24M

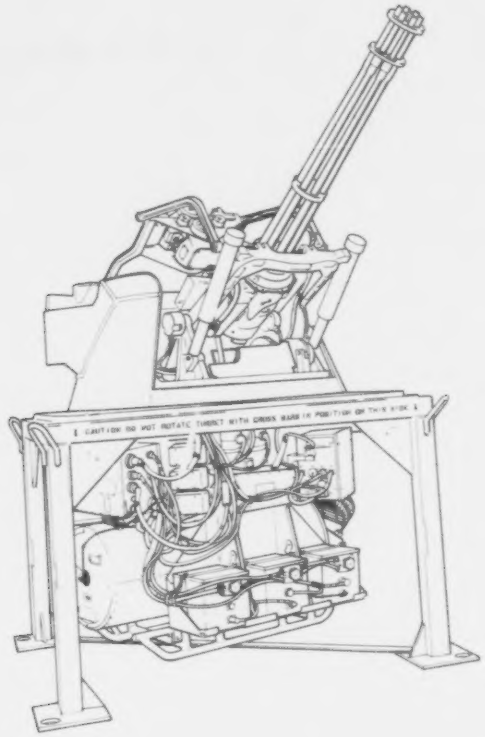
SM Tasks (FM 44-16R)

1054 1064

TRAINER AIR DEFENSE ARTILLERY MAINTENANCE ARMAMENT SYSTEM

NSN 6920-00-880-2564

DVC 44-29
M45


CAUTION DO NOT ROTATE TURRET WITH CROSS BARS IN POSITION ON THIS SIDE

DVC NO. 44-29

Training Category/Level Utilized:
Air Defense/Level 1

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

To train personnel in system (less radar) maintenance at direct and general support level. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of gun mount, similar to the M15A1 20mm mount, less the radar group components. All major components of the armament, ammunition, and feed functions are supplied with the trainer. The trainer is composed of end item hardware. It provides the maintenance student with maintainable hardware in a classroom environment without the necessity of withdrawing an actual weapon system from a unit.

The trainer is mounted on a welded, tubular-steel maintenance stand. Gussets and steel straps provide extra strength and bracing. Four lifting rings welded to the corners of the stand provide lifting and moving points.

Physical Information:

Test stand: 63'' x 81'' x 52''; 5,450 lb

Trainer overall (with cannon at extreme travel): 120'' x 126'' x 138''

Equipment Required, Not Supplied:
None

DVC 44-29

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
TM 9-6920-355-14

Reference Publications:
TM 9-2350-300 Series
TM 9-1005-286 Series

Training Requirements Supported:

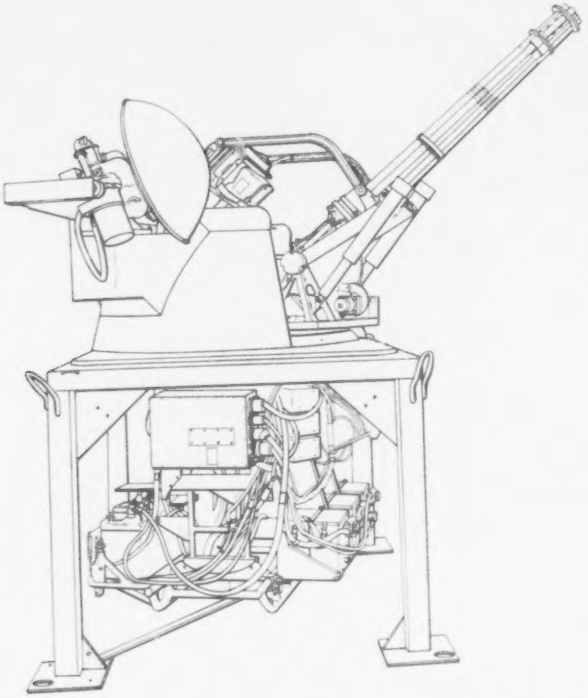
ARTEP 44-325

MOSC 24M

TRAINER AIR DEFENSE ARTILLERY MAINTENANCE, FIRE CONTROL

NSN 6920-00-880-2567

DVC 44-30
M46



DVC NO. 44-30

Training Category/Level Utilized:
Air Defense/Level 1

Logistic Responsible Command, Service, or Agency:
AMCCOM

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

To train personnel in fire control and radar maintenance at the organizational level. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of gun mount, similar to the M157A1 20mm mount, less components of ammunication storage and feed group. The trainer is composed of end item hardware. It provides the student with maintainable hardware in a classroom environment without the necessity of withdrawing an actual weapon system from a unit.

The trainer is mounted on a welded, tubular-steel maintenance stand. Gussets and steel straps provide extra strength and bracing. Four lifting rings welded to the corners of the stand provide lifting and moving points.

Physical Information:

Test stand: 65'' x 81'' x 52''; 4,600 lb

Trainer overall (with cannon at extreme travel): 120'' x 126'' x 138''

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

DVC 44-30

Power Requirements:
None

Applicable Publications:
TM 9-6920-356-14

Reference Publications:
TM 9-1005-286 Series
TM 9-2350-300 Series

Training Requirements Supported:

ARTEP 44-325

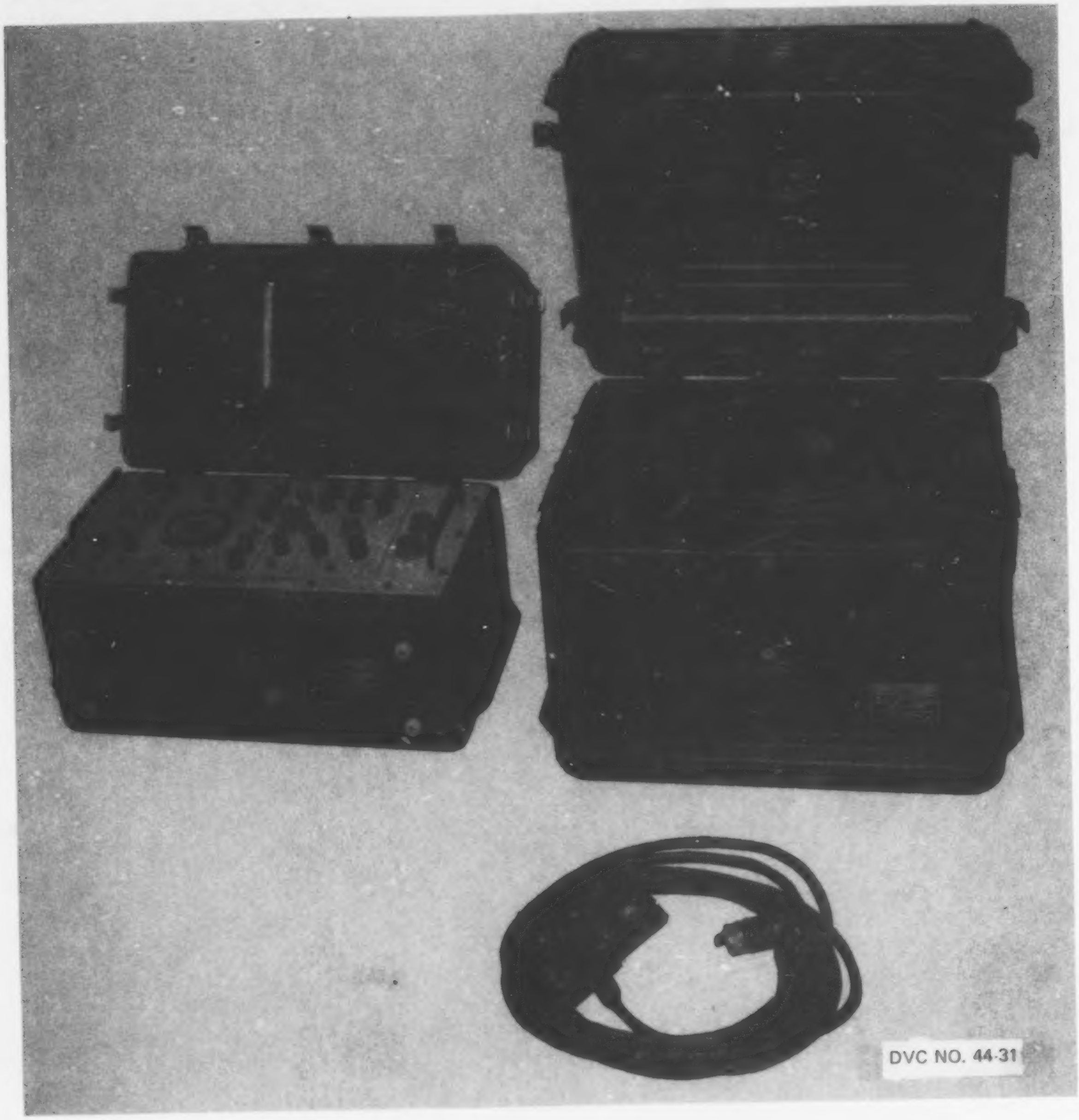
MOSC 16R and 24M

SM Tasks (FM 44-16R)

1054 1064

MONITORING SET, GUIDED MISSILE SYSTEM TRAINING, AN/TSQ-T3

DVC 44-31 NSN 6920-00-182-8833



DVC 44-31

Training Category/Level Utilized:

Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:

MICOM

Source and Method of Obtaining:

Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:

For field use to develop and maintain gunner proficiency so that maximum tactical effectiveness of CHAPARRAL Guided Missile System can be realized. The trainer is used in conjunction with the CHAPARRAL Guided Missile System. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of two major assemblies:

a. Instructor Control/Indicator Assembly (IC/IA).

b. Cable Assembly Group.

The two assemblies are independently packed to provide simplicity in handling and portability of the total system for use in a field environment. When performing tracking training with the AN/TSQ-T3, a Guided Missile Intercept-Aerial M-30 Training Missile is positioned on the launcher rail with a tactical guidance section of the CHAPARRAL installed. An artificial infrared source is introduced in front of the launcher and with the use of the Instructor Control/Indicator Assembly, errors are induced in the system. The gunner must then correct the fire unit position to bring the launch rail into the proper firing position.

Physical Information:

Instructor control/indicator assembly: 24" x 14" x 18"; 43 lb

Cable assembly group: 24" x 20" x 20"; 59 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The CHAPARRAL Simulator/Evaluator System operates from the plus and minus 24-volt regulated power supply and 28-volt master power of the CHAPARRAL Launching Station.

Applicable Publications:

None

Reference Publications:

TM 9-6920-585-12
TM 9-6920-585-24P

Training Requirements Supported:

ARTEP 44-325

MOSC 16P

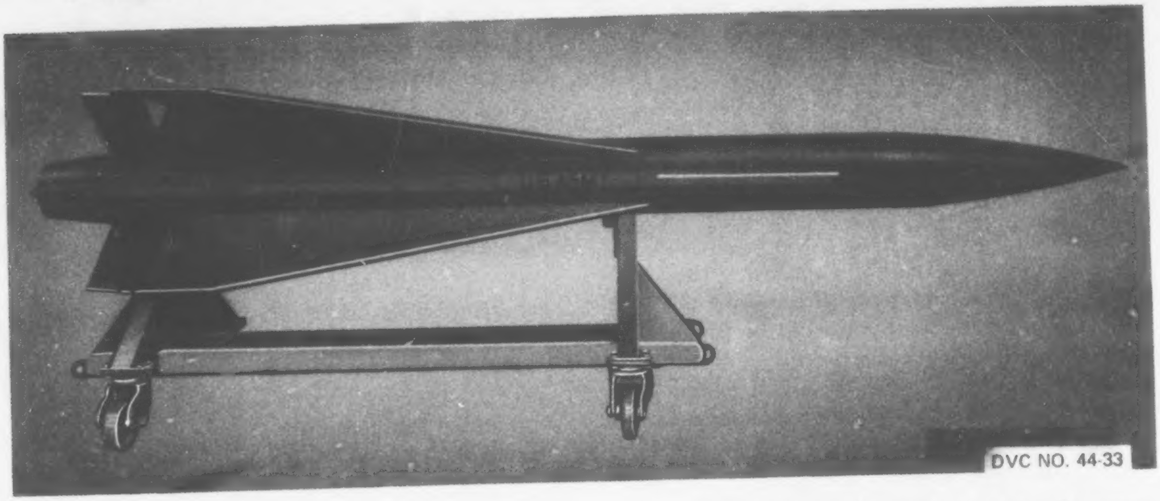
SM Task (FM 44-16P)

1051

GUIDED MISSILE SYSTEM, INTERCEPT-AERIAL TRAINER: (IMPROVED HAWK)

DVC 44-33
MTM-23B/C

NSN 6920-00-106-4451



Training Category/Level Utilized:
Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:
MICOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
To train troops in the general handling procedures and in performing safety and arming checks on Improved HAWK Missiles. Item is to be used at organizational level schools and on-the-job/in-service training. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The training missile is a full-scale missile which duplicates the physical dimensions, weight, and center of gravity of the tactical missile. It has an electrical "black box" which provides the circuitry necessary to allow performance of a simulated missile safety and arming check. It is used to provide practical training for operators of the HAWK Loader-Transporter and for launcher crewmen in performing missile transfer operations between pallets and launchers. It is also used to train launcher crewmen in performing missile safety and arming checks. The MTM 23B model has external switches that allow insertion of faults in the missile.

Physical Information:
198" long x 14" diameter, 47" wing span; 1,400 lb

Equipment Required, Not Supplied:
Loader-Transporter, GM (Improved HAWK)
Launcher, M192 (Improved HAWK)
Pallet, M1 Series (Improved HAWK)
Safety and Arming Test Aid

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
TM 9-1410-530-14

DVC 44-33

Reference Publications:
TM 9-1440-500-12/1
TM 9-1450-500-10

SM Task (FM 44-16D)
1057

Training Requirements Supported:

ARTEP 9-59 Task
51

ARTEP 44-245

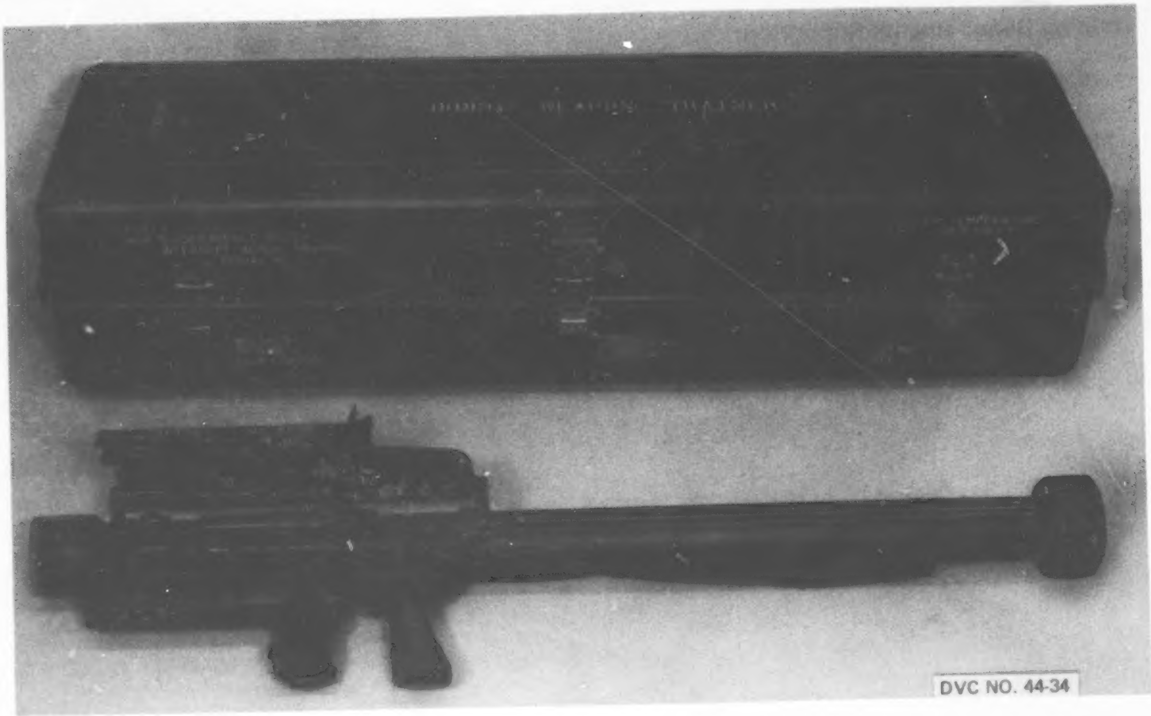
MOSC 16D

MOSC 24L

GUIDED MISSILE SYSTEM, INTERCEPT, AERIAL TRAINER (REDEYE)

DVC 44-34
M46E2

NSN 1425-00-933-5352



DVC NO. 44-34

Training Category/Level Utilized:
Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:
MICOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
The trainer provides the REDEYE gunner practice in the basic skills of REDEYE weapon handling, operation, sighting, and ranging, and is used to develop and maintain gunner proficiency. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The M46E2 Field Handling Trainer consists of a full-scale weapon launcher which has been ballasted to simulate the weight and feel of the tactical weapon. It is identical in external appearance to the REDEYE weapon. It is identical in external appearance to the REDEYE weapon. Controls and mechanical operations are the same as that of the real weapon. The trainer contains no operational electronic equipment. The trainer is issued with a ballast (inert) battery-coolant unit in Shipping-Storage Container M571 or M585.

Physical Information:
Field handling trainer M46E2: 51'' x 6'' x 11''; 29 lb
Ballast battery: 6'' x 2''; 1 lb
Container M571: 56'' x 17'' x 13''; 45 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

DVC 44-34

Applicable Publications:

TM 9-1400-425-12
TM 9-1400-425-35

Reference Publications:

FM 23-17
TM 9-1400-425-20P
TM 9-1400-425-34P

Training Requirements Supported:

MOSC 16P

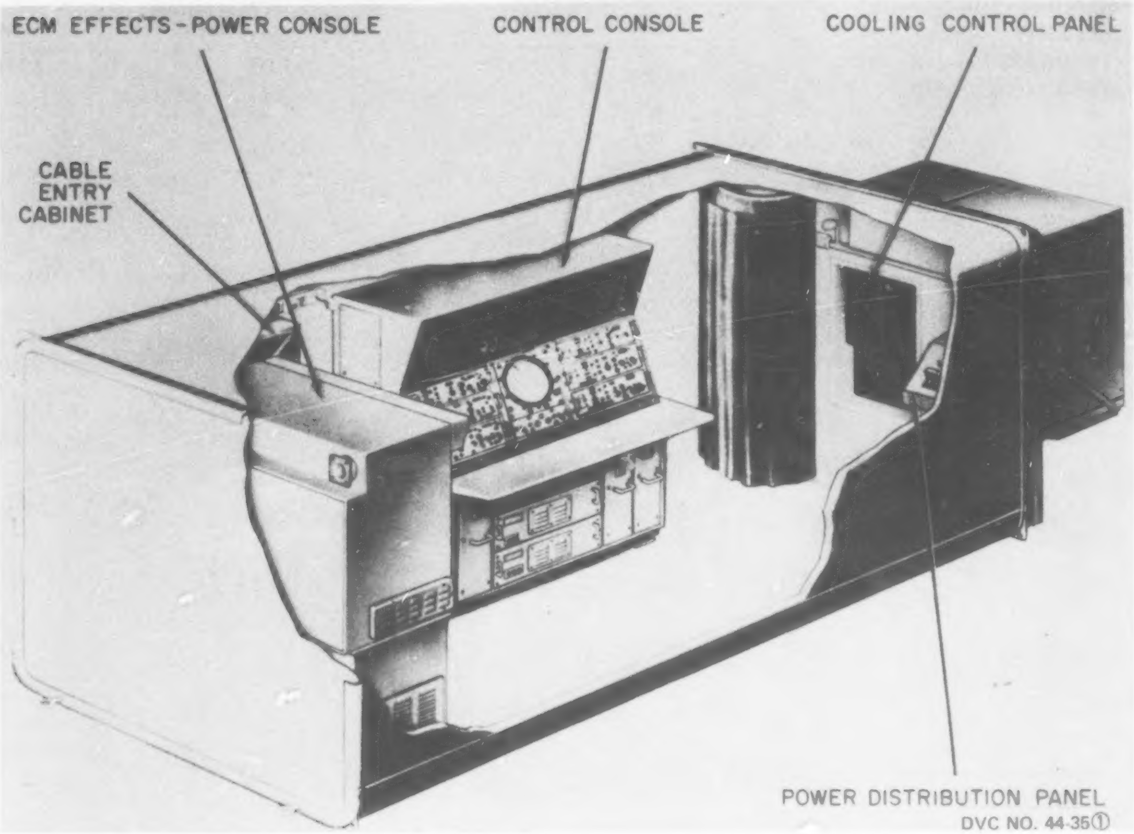
SM Tasks (FM 44-16P)

1057	1058	1059

RADAR SIGNAL SIMULATOR STATION GUIDED MISSILE SYSTEM: (IMPROVED HAWK)

DVC 44-35
AN/TPQ-29

NSN 1430-00-880-3357



DVC NO. 44-35①

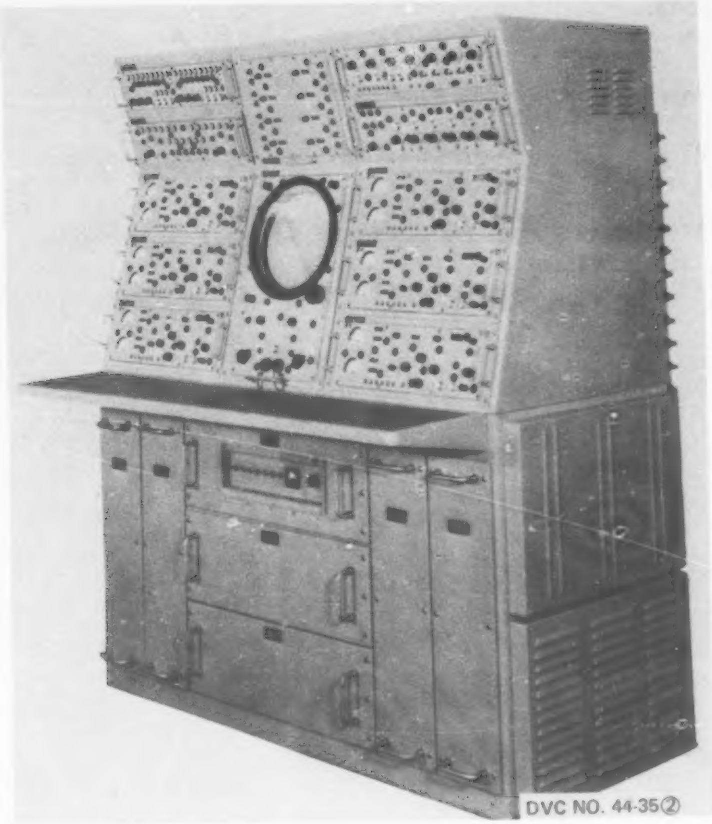
Training Category/Level Utilized:
Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:
MICOM

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
To simulate the problems which an Improved HAWK missile defense battery would encounter in an actual tactical situation. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The trainer is a radar signal generator which, when interconnected with an Improved HAWK missile battery, simulates up to six independently maneuverable air targets for display on the IBCC video indicators. The device simulates target doppler, allows the IBCC operators to simulate missile launching and firing procedures, and computes whether the launch was a kill or a miss. The device can simulate IFF signals and ground clutter in conjunction with the simulated air targets. In addition, the device can simulate a wide variety of brute force and deceptive jamming to train IBCC firing crews to recognize, analyze, see through, and evade enemy efforts to jam the battery radars. The trainer can be trailerized and air-conditioned. Its major units are the simulator shelter,



DVC NO. 44-35②

control console, countermeasures console, power distribution panel, and the relay-cable test panel. An additional unit, the instructor's control-indicator, is used in the IBCC. The device allows the entire Improved HAWK defense team to play the problems out as they would a game, so that when it becomes necessary to face an actual defense situation, crew action will be the reptition of familiar tasks. The device may be used for training in any situation which might occur in use of the tactical Improved HAWK System. Simulation of independently maneuverable air targets reduces the requirement for real targets in training. Use of the device makes possible inexpensive and safe training in launching and firing procedures. The device computes kill or miss without actual launch. This simulator is a product-improved version of the AN/TPQ-29 (XO-1) intended for use with the Improved HAWK System.

Physical Information:

Van: 144'' x 72''; 5,000 lb

Equipment Required, Not Supplied:

Tactical Improved HAWK missile battery

Special Installation Requirements:

None

Power Requirements:

416 vac, 3-phase, 400 cycle, 10 kva power source required (not supplied with device)

Applicable Publications:

FM 44-103

DVC 44-35

Reference Publications:
TM 9-1430-532 Series

Training Requirements Supported:

ARTEP 44-425

MOSC 16E

ARTEP 9-59 Tasks

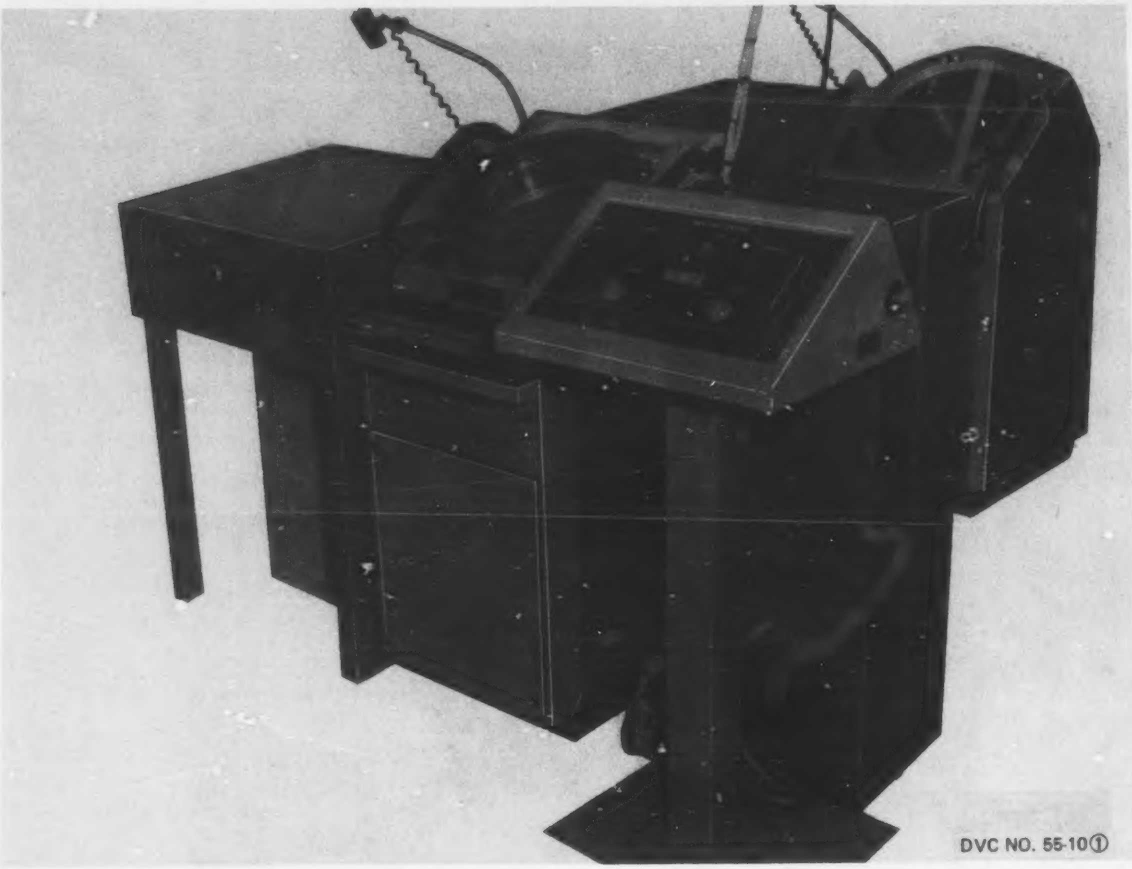
56 57

MOSC 24H

best copy available

COLLISION AVOIDANCE RADAR TRAINER

DVC 55-10 **NSN 6940-01-075-8380**



DVC NO. 55-10①

Training Category/Level Utilized:
Transportation/Level 1

Logisitic Responsible Command, Service, or Agency:
PM TRADE

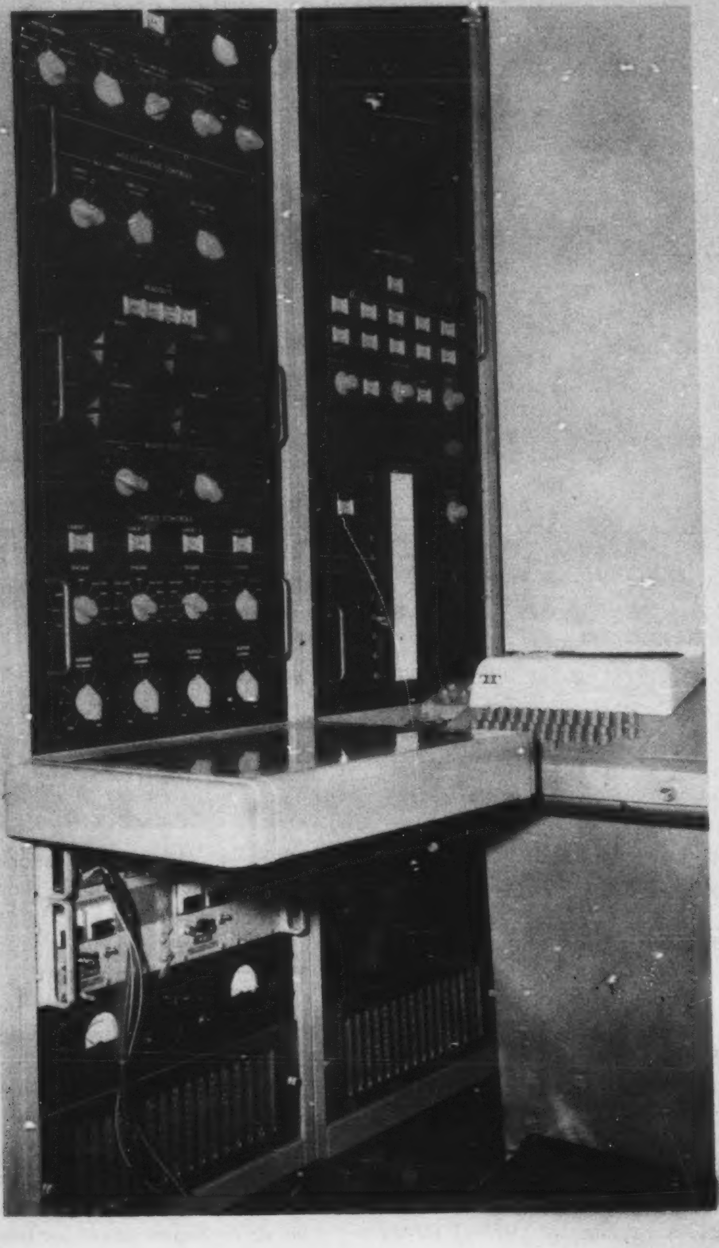
Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

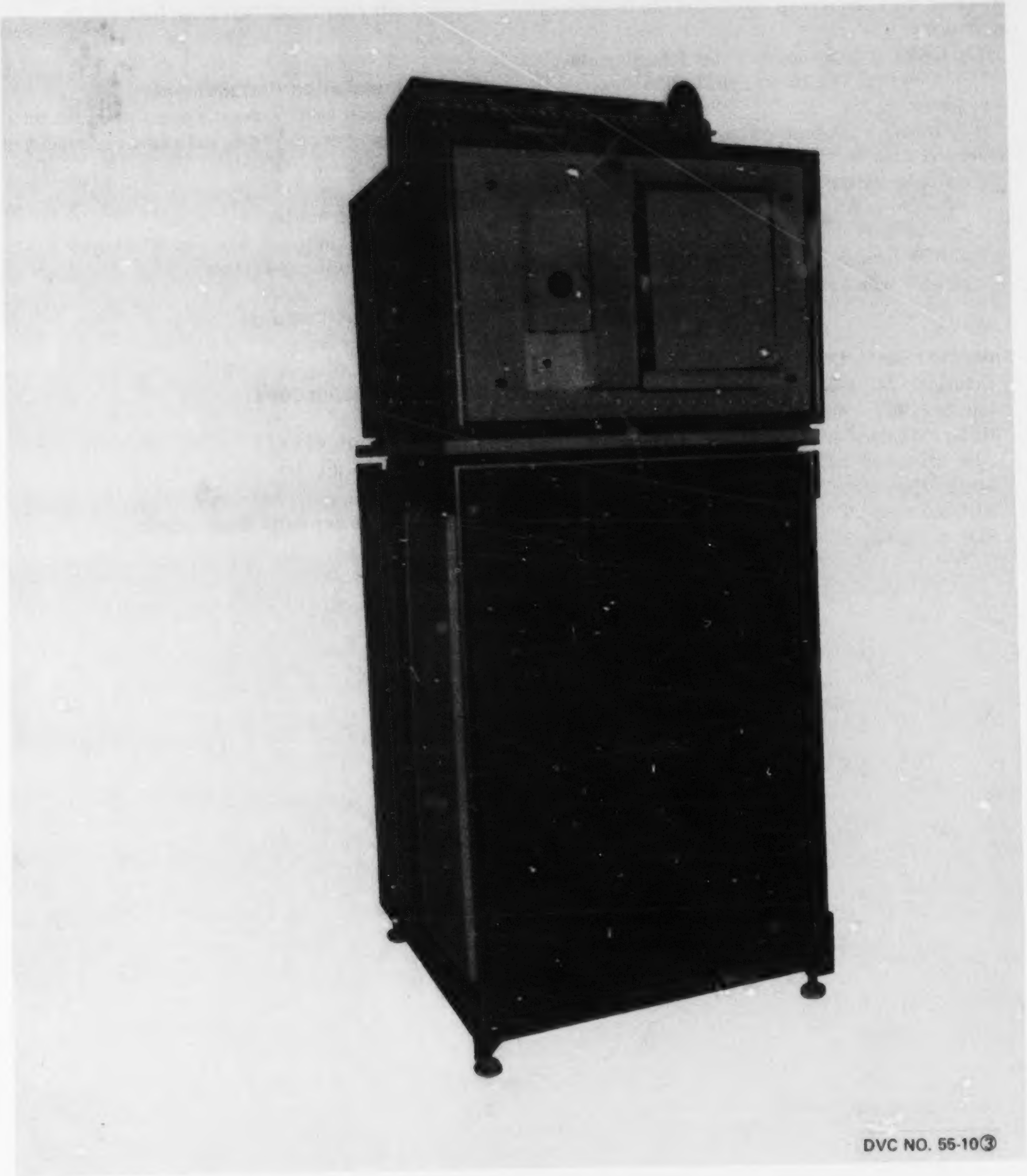
To provide a classroom installation to duplicate navigational radio signals and relay these signals to receivers to provide audio, visual, or a combination of both for training and certification of marine personnel. Four types of navigational aids can be demonstrated by using the nucleus of the device (computer and interface) plus the proper receiver. Provides for initial Marine Radar Observers certificate and renewal of certificates for Marine Radar Observers, Coast Guard endorsed. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The Collision Avoidance Radar Trainer (CART) is a composite device utilizing a digital computer, an interface unit, plus appropriate display units. The instructor programs the computer with prepunched paper tape to simulate an existing harbor or shore line. The student, who is positioned in front of a PPI, can readily solve a problem in navigation or collision avoidance. The instructor can change a given set of circumstances manually, within the limitations of the machine. The instructor can program the computer with either a loran, an RDF, or an ADF tape and demonstrate the correct use of loran, radio direction finding, and automatic direction finding to the student. The loran and direction finder indicators are not located in the same classroom as the radar indicators.



DVC NO. 55-10②



DVC NO. 55-10③

DVC 55-10

However, only one type of instruction can be simulated at one time.

The CART system consists of the following units:

a. Computer (1), Honeywell, DDP 516, octal, 8K core storage.

b. Interface (1), Singer-Link, control unit for radar loran, and direction finders

c. Radar Indicators (6), Raytheon, 3.2 CM

d. Loran Indicators (4), Raytheon, A and C

e. ADF Indicators (2), Benmar

f. RDF Indicator (1), MacKay, URD-1

g. RDF Indicators (3), Bloodworth, SRD-8

Physical Information:

Computer: 24'' x 26'' x 52''; 300 lb
Interface: 96'' x 48'' x 24''; 500 lb
Radar indicators: 40'' x 18'' x 24''; 250 lb
ADF indicators: 14'' x 14'' x 14''; 50 lb
Loran indicators: 6'' x 14'' x 17''; 20 lb
RDF indicators: 9'' x 12'' x 11''; 20 lb
RDF indicators: 9'' x 12'' x 11''; 20 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Climatic controlled classroom that maintains the ambient room temperature at 70° F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

Computer and interface: 110 vac, 50-60 cycle
Radar set: 110 vac, 400 cycle

Applicable Publications:

Commercial manual

Reference Publications:

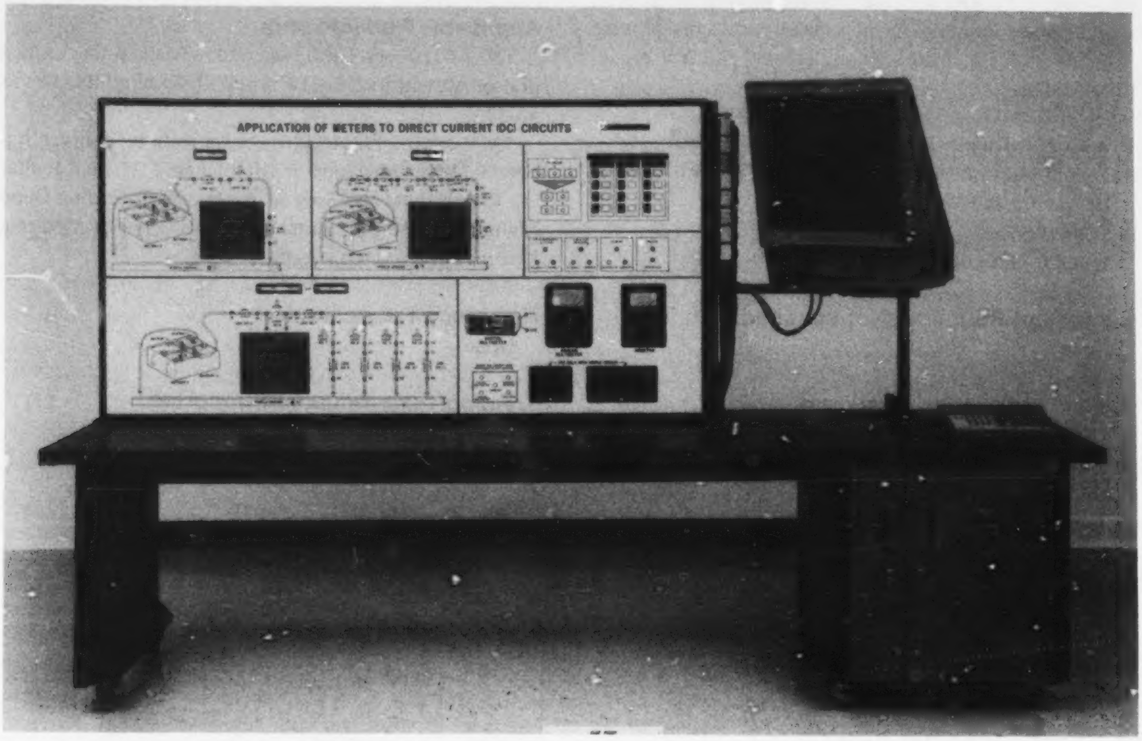
TM 11-1530
NAVSHIPS 93081 (A)
NAVSHIPS 93081.42

Training Requirements Supported:

MOSC 500A

APPLICATION OF METERS TO DIRECT CURRENT (DC) CIRCUITS TRAINER

DVC 55-11 **NSN None**



Training Category/Level Utilized:

Transportation/Level 1

Logistic Responsible Command, Service, or Agency:

PM TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to provide training and familiarization in taking measurements on various circuit types (simple, series, and parallel). The trainer provides maintenance personnel with training in proper test instrument selection and operation for different simulated circuit types.

Functional Description:

Device 55-11 is a computer-based training system, providing test instrument operating characteristics for various types of circuits.

The device consists of a display panel of simulated circuit types and test instruments (ammeter, analog multimeter, digital multimeter, loadbank, and variable resistor), an EC 3 computer, video-disc player and monitor, control console, two diskette drive units, visuals, two flexible diskettes, trainer power cable, operator's manual, and maintenance manual. Five test lead assemblies are also supplied with the trainer.

This student/instructor operated device is designed for demonstration or student exercise hands-on use and requires minimal familiarization time. No warm-up time, special cooling, or special maintenance personnel are required.

Student motivation is accomplished through 22 unique exercises and immediate performance feedback as the student uses the various simulated test equipment to take measurements on the appropriate circuit type.

Through the use of the control console, the simulated circuits and test instruments on the display panel respond according to actual test instrument circuit interface. Student performance is monitored by indicators contained on the control console to indicate total time to solve the problem. Display panel switches allow the student to select and answer exercise problems, check instrument selection and test procedure, and call up information on the videodisc monitor. Display panel indicators provide exercise problem, instrument selection, and test procedure feedback.

Physical Information:

Length: 120 in.
Height: 71 in.
Depth: 29 in.
Weight: 485 pounds

Equipment Required, Not Installed:

None

Special Installation Requirements:

The trainer is designed to operate in a standard classroom within a temperature range of 39°F to 100°F and a relative humidity of up to 80 percent.

Power Requirements:

115 volts, single-phase, 60 Hz, 15 amps.

Applicable Publications:

TM 9-6910-249-10(u), Operator's Manual for Application of Meters to Direct Current (DC) Circuits, Device 55-11.

TM 9-6910-249-24&P(u), Organizational, Direct Support, and General Support Maintenance Manual Including Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts) for Application of Meters to Direct Current (DC) Circuits, Device 55-11.

Reference Publications:

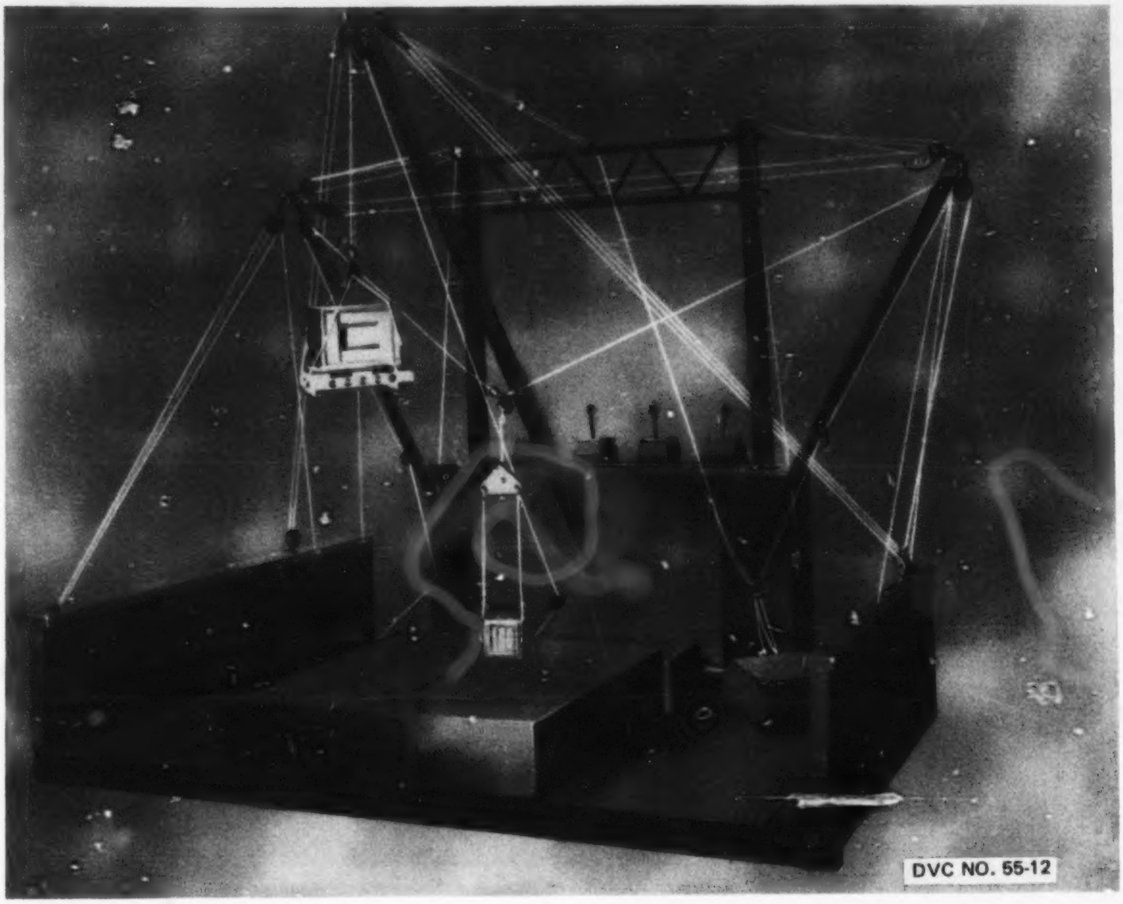
None

Training Requirements Supported:

MOSC 63B

CARGO HANDLING TRAINER

DVC 55-12 NSN 6910-01-064-4419



Training Category/Level Utilized:
Transportation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
This trainer is used in classrooms to instruct stevedore personnel in the principles and procedures of cargo handling, the rigging of cargo booms and related gear, and to demonstrate shipboard cargo handling procedures.

The specific training requirements supported are shown following the descriptive data.

Functional Description:
The device is a one-eighth scale mockup of a typical AKA kingport and boom system with operating booms, electric winches, and related rigging.

Physical Information:
96'' x 120'' x 96''; 1,070 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

DVC 55-12

Power Requirements:
110 vac, single-phase, 60 cycle

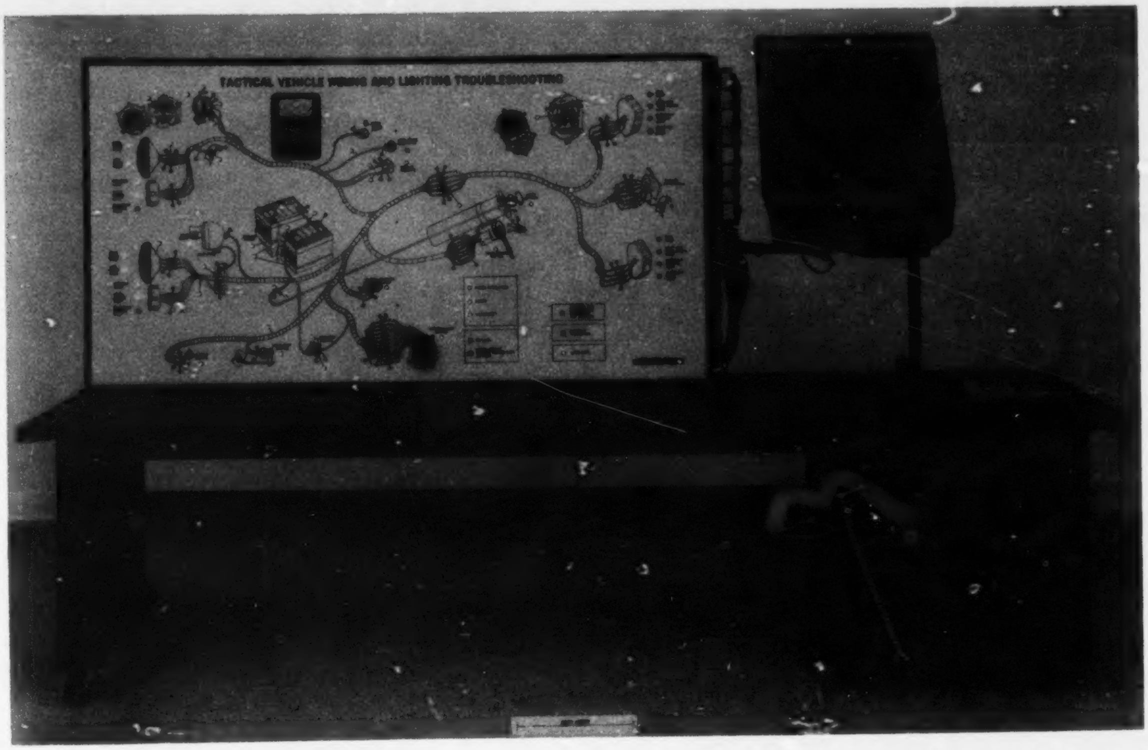
Applicable Publications:
NAVTRADEV P-4552, Operator and Maintenance Guide, Cargo Handling Training Aid, Device 11H44

Reference Publications:
None

Training Requirements Supported:
ARTEP and SM tasks associated with MOSC 57H.

TACTICAL VEHICLE WIRING AND LIGHTING TROUBLESHOOTING TRAINER

DVC 55-14 **NSN None**



Training Category/Level Utilized:
Transportation/Level 1

Logistic Responsible Command, Service, or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to provide maintenance training and familiarization with tactical vehicle wiring and lighting systems. The trainer provides organizational, direct support (DS), and general support (GS) maintenance personnel with training in operating procedures, symptom analysis, and troubleshooting procedures.

Functional Description:
Device 55-14 is a computer-based training system, providing operating and maintenance characteristics for simulated Tactical Vehicle wiring and lighting systems.

The device consists of a display panel of simulated wiring and lighting system components and multimeter, an EC 3 computer, video disc player and monitor, control console, two diskette drive units, visuals, two flexible diskettes, trainer power cable, operator's manual, and maintenance manual. Two test leads are also supplied with the trainer.

This student/instructor operated device is designed for demonstration or system maintenance hands-on use and requires minimal familiarization time. No warm-up time, special cooling, or special maintenance personnel are required.

Student motivation is accomplished through 23 unique malfunction simulations, 4 measuring exercises, and immediate performance feedback as the student operates the system and multimeter.

Through the use of the control console, the simulated systems on the display panel respond with normal operation or system malfunctions similar to the actual vehicle systems. Student performance is monitored by indicators contained on the control console to indicate total time to solve the problem and components replaced.

DVC 55-14

Physical Information:

Length: 120 in.
Height: 71 in.
Depth: 29 in.
Weight: 485 pounds

Equipment Required, Not Supplied:

None

Special Installation Requirements:

The trainer is designed to operate in a standard classroom within a temperature range of 39°F to 100°F and a relative humidity of up to 80 percent.

Power Requirements:

115 volts, single-phase, 60 Hz, 15 amps.

Applicable Publications:

TM 9-6910-251-10(u), Operator's Manual for Tactical Vehicle Wiring and Lighting Troubleshooting, Device 55-14.

TM 9-6910-251-24&P(u), Organizational, Direct Support, and General Support Maintenance Manual Including Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts) for Tactical Vehicle Wiring and Lighting Troubleshooting, Device 55-14.

Reference Publications:

None

Training Requirements Supported:

MOSC 63B

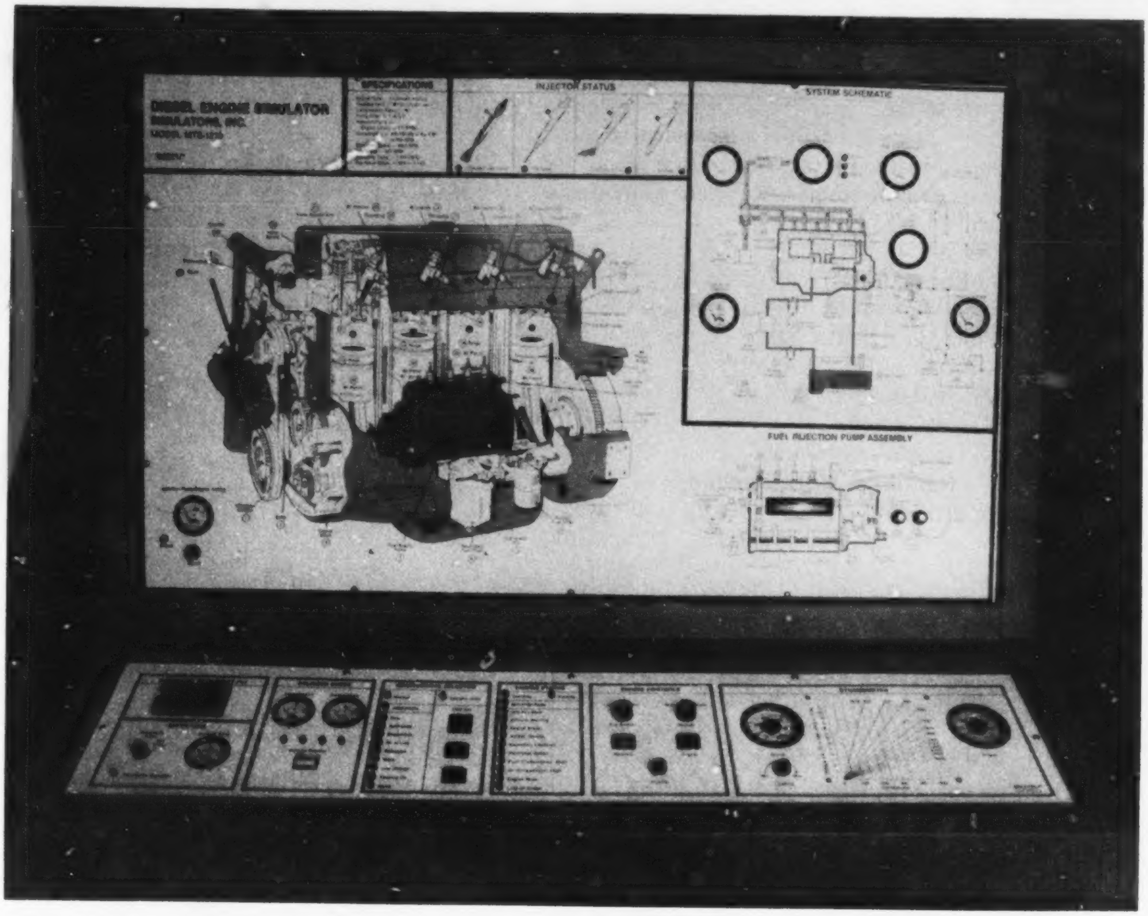
SM 091-474 Task

3143

DIESEL ENGINE SIMULATOR

DVC 55-18

NSN PENDING



Training Category/Level Utilized:
Level 2 & 5 Mechanics

Logistic Responsibility Command, Service or Agency:
PM TRADE

Source and Method of Obtaining:
Not generally available for issue.
Special order item.

Purpose of Trainer:

For classroom use or shop training on Diesel Engine technology. The device is a totally electronic simulation of a typical automobile or truck type of engine. The device allows easy insertion or removal of fault conditions by the use of pre-programmed malfunctions. The device provides training for mechanics into operation and trouble-shooting techniques. It is intended to cut down on instruction time, increase trainee enthusiasm, provide theoretical and hands-on use, offer built-in testing and evaluation features and provide training at all levels.

Functional Description:

The simulator portrays a typical four cylinder, four cycle, turbo-charged diesel engine. The device consists of a metal cabinet with a front panel containing a graphic and schematic layout of the engine and various indicators and controls. A lower "desk" panel contains various controls, indicators, testing devices, and a built-in simulated dynamometer. An Instructors' panel located on the side of the cabinet provides facilities for selecting, inserting and clearing fault conditions and also contains the built-in trainee evaluation devices.

The simulator is driven by a digital micro-computer

DVC 55-18

located inside the cabinet. The device is fully interactive and reacts to programmed fault conditions as in a real engine.

All sub-systems of an actual engine are covered, including the fuel, electrical air and mechanical features. The device is safe to use, cannot be damaged by incorrect trainee actions during normal use and requires no tools.

A variable speed/stop action feature is available and the simulator can also accomodate a printer to record the trainees' activity.

Physical Information:

Cabinet: 54"W x 44"H x 23"D (at base).
Upper Front Panel: 50" x 30"
Lower Desk Panel: 50" x 10½"
Instructors' Panel: 13" x 8"
Weight: approx 150 lbs.

Equipment Required, Not Supplied:

Table or Bench 30" high - top 60" x 30" with a non-slip top or ½" lip on three sides.

Special Installation Requirements:

Classroom environment approximately 8' x 8' minimum. 110 VAC 60 Hz electrical outlet.

Power Requirements:

110 VAC, 60 Hz, 250 Watts.

Applicable Publications:

TD 55-6910-701, Operation and Maintenance Instructions for Diesel Engine Simulator

Reference Publications:

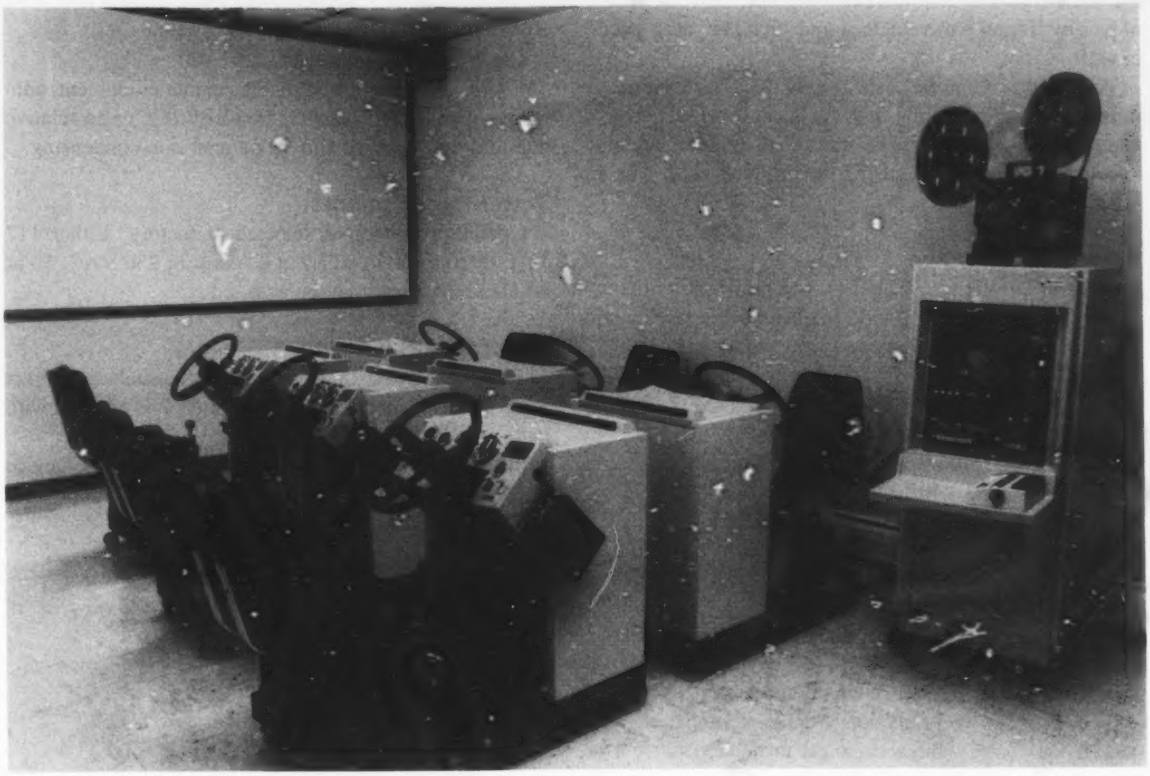
None

Training Requirements Supported:

SM 091-169	SM 091-499
0112	1052
0306	1154
0308	1155
0309	1801
0310	1803
0317	1804
	1959
	1962
	3050
	3060
	3080

LOW COST TRUCK DRIVE TRAINER (LCTDT)

DVC 55-19 **NSN: Pending**



Training Category/Level Utilized:

Transportation/Level 1

Logistic Responsible Command, Service, or Agency:

PM-TRADE

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

To provide training and evaluation of students who are learning the correct operation and safe practices required to drive mult-geared vehicles, e.g. trucks.

Functional Description:

The Low Cost Truck Driver Trainer (LCTDT) is a fully automated driver training/testing system of solid state design consisting of an upright instructor console that interfaces with a modified 16mm projector, a library of specially designed training films, and six trainee simulation stations. This device is the major component used in a laboratory phase for training drivers to operate a multi-geared vehicle.

The Instructor Console houses the electronics and solid state readouts, which are the nerve center of the system. The console's main function is to monitor respond to, interpret, and in turn relay information to both the instructor and trainee about individual progress/performance while driving to filmed traffic situations.

Each driver trainee sits in a driver compartment, similar to but not duplicating any specific model or make truck, and learns to use proper procedural and operational skills necessary for safe truck driving performance. Through the film programs, trainees are required to take specific driving actions. The sound track of each film has been specially designed to trigger the Instructor Console to check trainee performance of: signalling, steering, accelerating, braking, transmission operation, rpm control, and speed control at designated times in driving sequences. Trainees not performing in the prescribed manner are immediately identified and the console provides immediate feedback to both the instructor and trainee so that corrective action can be taken. Using headphones the trainee also is able to practice proper shifting techniques by listening to vehicle sounds that indicate a need to shift gears.

The Control Console also accumulates each trainees improper driving actions and evaluates overall performance of trainees for the instructor. A printout of this information can be made using the printer provided as a feature of the system.

Physical Information:

Instructor Console: (one provided)	56'' high (1.422 mm) 24'' wide (610 mm) 39½ deep (1.003 mm) 185 lbs. weight (85 kg)
Simulator Cab: (six provided)	54'' long (1.37 meters) 29 3/4'' wide (756 mm) 40'' high (1.05 meters) 200 lbs. weight 90.9 kg)
Projector (modified)	115 VAC - 50/60 Hz Primary Lens - 1½'' Anamorphic Lens - standard 2 standard 1/4'' (6.4 mm) jacks Wall-mounted speakers (2) Projection Screen (compatible to the wide angle projection)
Headphones:	Light-weight, 8ohm with 1/4'' plug and at least 8' cable (one per trainee station)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Classroom minimum size: 20' x 20' x 7'

Classroom climatic control that maintains ambient room temperature at 50°F (10°C) to 82°F (28°C) and relative humidity between 40 and 90 percent non-condensing.

Power Requirements:

Operating voltage is selected at factory. Either 117 VAC ± 10%, 50 to 60 Hz at 20 amps or 230 VAC, 50 or 60 Hz at 10 amps may be selected.

Applicable Publications:

TD 55-6910-702-14-1 Operator, Organizational Direct Support and General Support Maintenance Manual with Parts List.

Introduction Manual - Low Cost Driver Trainer, Device 55-19

Heavy Goods Vehicle Film Curriculum
Manuals (six)

Reference Publications:

Training Requirements Supported:

SM 551-721-1307 Task
SM 551-721-1313 Task
MOSC 64C

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